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IN REPLY REFER TO:

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C 4610

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MARINE CORPS ORDER P3500.54

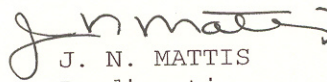
From: Commandant of the Marine Corps
To: Distribution List

Subj: AVIATION TRAINING AND READINESS (T&R) MANUAL, TACTICAL AIR OPERATIONS
CENTER (TAOC) (SHORT TITLE: T&R MANUAL, TAOC)

Ref: (a) MCO P3500.14H
(b) MCO 5215.1H

Encl: (1) LOCATOR SHEET

1. Purpose. To publish policies, procedures and standards regarding the training of TAOC personnel per reference (a).
2. Cancellation. T&R Manual, MCO P3500.19B, Volume 5, Chapters 4-6.
3. Background. Reference (a) restructures the T&R manual organization from nine volumes to 25 individual Marine Corps orders. This order prescribes a unique template to provide the aviation commander with standardized programs of instruction. As such, this order deviates from the five paragraph order format directed by reference (b).
4. Recommendations. Recommended changes to this order are invited, and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General, Training and Education Command (C 4610), Marine Corps Combat Development Command, 3300 Russell Road, Quantico, VA 22134-5001.
5. Applicability. This manual is applicable to the Marine Corps Total Force.
6. Certification. Reviewed and approved this date.


J. N. MATTIS
By direction

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T&R MANUAL, TAOC

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of Person Incorporated Change

T&R MANUAL, TAOC

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| 3 | AIR CONTROL ELECTRONICS OPERATOR (ACEO) (MOS 7234) |

T&R MANUAL, TAOC

CHAPTER 1

AIR DEFENSE CONTROL OFFICER (ADCO) (MOS 7210)

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CHAPTER 1

AIR DEFENSE CONTROL OFFICER (ADCO)
(MOS 7210)

100. INTRODUCTION

1. The purpose of the Marine Aviation Training and Readiness (T&R) program is to provide the commander with standardized programs of instruction for all aviation personnel. The goal is to develop unit warfighting capabilities, not to measure the proficiency of individuals. Syllabi are based on specific performance standards designed to ensure proficiency in core competencies. An effective T&R program is the first step in providing the MAGTF Commander with an Aviation Combat Element (ACE) capable of accomplishing any and all of its stated missions. The T&R program provides the fundamental tools for commanders to build and maintain unit combat readiness. Using these tools, unit training managers can construct and execute an effective training plan which supports the unit's mission essential tasks.

2. Unit training management is the application of the Marine Corps Training Principles and the Systems Approach to Training (SAT) to satisfy the training requirements of commanders at all levels in order to accomplish their wartime mission. Guidance concerning unit training management and the process for establishing effective unit training management programs are contained in MCRP 3-0A, Unit Training Management Guide, and form the basis for the development of this manual. Familiarity with MCRP 3-0A will enhance your understanding of the SAT used in T&R development and Marine Corps UTM principles.

3. To maintain congruity in aviation and ground T&R programs, CG TECOM (C4610) is coordinating an update to the aviation unit evaluation mechanism. Efforts are underway to incorporate Collective Training Standards (CTS) into aviation T&R manuals. The goal of this effort is to replace MCCRES Mission Performance Standards (MPS) with T&R CTS and utilize T&R as the unit evaluation mechanism. Like MPS, CTS are criteria that specify mission and functional area unit proficiency standards for combat, combat support, and combat service support units.

4. The effort to replace MCCRES MPS with T&R CTS is in the development phase. The concept is to create separate unit chapters in all aviation T&R manuals which contain unit CTS in the form of unit events. CTS will be derived and implemented into T&R manuals using existing unit MCCRES MPS as a baseline. Unit evaluation will be standardized in T&R manuals, not in a separate document. CG TECOM (C4610) plans to cancel unit MCCRES orders as respective unit CTS chapters are approved. Until unit T&R CTS are formally approved, MCCRES shall be utilized as the aviation unit evaluation standard.

101. CORE COMPETENCIES/SKILLS

1. Core competency serves as the foundation of the T&R program. Core competencies are those core capabilities and skills that support the Mission Essential Tasks (METs), derived from FMFM 5-1 and T/O mission statements, which are realistically expected to be assigned in combat.

2. Mission. Detect, identify and control the intercept of hostile aircraft and missiles and to provide air direction and control to friendly aircraft in the accomplishment of support missions.

3. TAOC Mission Essential Tasks

- a. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations (A).
 - Conduct expeditionary operations to include the capability to phase control ashore.
- b. (UJTL TA 2.4) Disseminate Tactical Warning Information and Attack (B).
- c. (UJTL TA 3.2.7) Conduct Air and Missile Defense Operations (C).
 - Conduct air surveillance.
 - Control surface and airborne weapons systems.
 - Conduct theater missile defense weapons systems management.
- d. (UJTL TA 3.2.8) Conduct Air-to-Air Operations
 - Control airborne weapons systems.
- e. (UJTL TA 3.3) Coordinate Battlespace Maneuver and Integrate with Firepower (E).
 - Conduct combat airspace management.
 - Integrate with MAGTF, joint, and combined airspace command and control systems.
- f. (UJTL TA 5.2.1) Establish, Operate and Maintain Baseline information Exchange (F).
 - Conduct combat airspace management.
 - Integrate with MAGTF, joint and combined airspace command and control systems.
- g. (UJTL TA 6.5) Provide for Combat Identification - Conduct air surveillance (G).
- h. (UJTL TA 7.1) Conduct Mission Operations in a CBRNE Environment (H)
 - Conduct combat operations in an NBC environment.

CORE SKILLS	METs							
	A	B	C	D	E	F	G	H
Tactical Air Traffic Control				X	X			X
Combat Identification and Surveillance		X	X	X			X	X
Air Intercept Control			X	X				X
Missile Control			X		X			X
Data Link Coordination		X	X	X			X	X
Air Battle Management	X	X	X	X	X	X	X	X

4. TAOC Core Capability. A core capable TAOC is task organized to provide three combat crews to execute the following functions: tactical air traffic control (TATC), combat identification and surveillance, air intercept control, missile control, data link coordination, and air battle management. It is also capable to sustain 24-hour operations in support of a MEF.

5. EW/C Core Capability. A core capable EW/C augments the TAOC or deploys independently to provide limited TATC, combat identification and surveillance, air intercept control, missile control, and data link coordination. It is also able to sustain 24-hour operations.

6. TAOC Detachment Crew Configuration

a. TAOC Crew

- Senior Air Director.
- Senior Weapons Director.
- Air Intercept Controllers.
- Missile Controller.
- Assistant Weapons Controllers.
- Senior Traffic Director.
- Tactical Air Traffic Controller.
- Surveillance Identification Director.
- Surveillance Operators.
- Data Link Coordinator.
- Systems Configuration Coordinator.

b. Sector Air Defense Facility Crews

- Sector Air Defense Commander.
- Sector Air Defense Facility Operations Officer.
- Sector Air Defense Facility Crew Chief.
- Sector Air Defense Facility Operators.
- GBAD Representative (covered in separate T&R).
- Intelligence Officer (covered in separate T&R).
- Aviation Representative (covered in separate T&R).

7. Core Competency. Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum core skill proficiency and minimum numbers of leaders per paragraphs 7a and 7b below.

a. Minimum Unit Core Skill Requirements. In order to be considered core competent, a unit must possess a minimum number of crewmembers competent in each core skill, as noted below. In order to be considered competent in a core skill, an individual must attain and maintain proficiency in core skill events, as delineated in paragraphs 7a(1) and 7a(2) below.

TAOC (EW/C)			
CORE SKILL	7210/7202	7236	7234
Tactical Air Traffic Control	2(0)	1(1)	3(1)
Combat Identification and Surveillance	1(1)	2(1)	6(3)
Air Intercept Control	2(0)	4(3)	6(3)
Missile Control	1(0)	2(0)	0(0)
Data Link Coordination	0(0)	0(0)	3(3)
Air Battle Management	11(5)	1(1)	0(0)

Note: Columns 2, 3, 4: first number represents personnel required for a core competent TAOC crew; the number in parenthesis represents personnel required for a core competent EW/C crew.

(1) Events Required to Attain Individual Core Skill Competency. To initially attain competency in a core skill, an individual must successfully complete all of the T&R events listed in the chart below for the core skill.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination	Air Battle Management
7210/7202 T&R Event Requirements to Attain Competency	STD-214	SID-243	AIC-325	GBAD-303	SID-243	SWD-403 SAD-417 SOPS-422 SADC-432
7236 T&R Event Requirements to Attain Competency	STD-303	SID-322	AIC-225	GBAD-203	SID-322	SWD-333 SAD-407
7234 T&R Event Requirements to Attain Competency	TATC-313	SO-214	AWC-224		DLC-306	SDFO-404 SDFC-411

(2) Events Required to Maintain Individual Core Skill Competency. To maintain competency in a core skill, an individual must maintain proficiency in all of the core skill events listed in the chart below.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination
7210/7202 T&R Event Requirements to Maintain Competency	None	SID-227 SID-231	AIC-319	GBAD-302	None
7236 T&R Event Requirements to Maintain Competency	None	SID-316 SID-320	AIC-219	GBAD-202	None
7234 T&R Event Requirements to Maintain Competency	TATC-313	SO-214	None	None	DLC-306

b. Minimum Flight Leader Requirements. As a minimum, in order to be considered core competent, a unit must possess the below numbers of aircrew with the listed flight leadership designations.

LEADERSHIP DESIGNATION	TAOC(EW/C) TOTAL (7200's)
SADC	3(0)
SADC OPS	3(0)
SAD	3(3)
SWD	3(3)
STD	3(1)
SID	3(2)

102. SUMMARY/INDEX OF LIVE/SIMULATED EVENTS

1. Core Skill Introduction Training. The Core Skill Introduction training summary is contained in the MCCES Program of Instruction (POI) for the TADC.

2. Core Skill Basic Training. Table 1-1 contains a listing of the Core Skill Basic training events and associated page numbers.

Table 1-1.-- Core Skill Basic Training Events.

EVENT	GOAL	PAGE
SYS-200	Cable a TAOM system	1-30
SYS-201	Perform TAOM and ECU pallet pack-up	1-31
SYS-202	Set-up a TAOM for operations	1-31
SYS-203	Operate a TAOM	1-31
SYS-204	Perform system turn up/turn down	1-32
SYS-205	Perform organizational level maintenance (OLM) on the TAOMs	1-32
STD-210	Perform as TATC	1-33
STD-211	Conduct tactical planning for the Traffic Section	1-34

Table 1-1.-- Core Skill Basic Training Events--Continued.

EVENT	GOAL	PAGE
STD-212	Perform as STD	1-34
STD-213	Perform as STD	1-35
STD-214	Designate as STD	1-35
SID-220	Perform as a Surveillance Operator	1-36
SID-221	Perform as DLC	1-37
SID-222	Perform DLC functions	1-37
SID-223	Perform DLC functions	1-37
SID-224	Perform DLC functions	1-38
SID-225	Prepare/set-up ADCP as a stand alone system	1-38
SID-226	Prepare/set-up ADCP within a TAOM configuration	1-39
SID-227	Conduct tactical planning for the Surveillance Section	1-39
SID-228	Maximize radar performance	1-40
SID-229	Plan for emplacement and employment of TMD site	1-40
SID-230	Perform EW operations	1-41
SID-231	Perform as SID	1-41
SID-232	Perform as SID	1-42
SID-233	Designate as SID	1-42

3. Core Skill Advanced Training. Table 2-2 contains a listing of the Core Skill Advanced training events and associated page numbers.

Table 1-2.-- Core Skill Advanced Training Events.

EVENT	GOAL	PAGE
GBAD-300	Perform MC functions	1-43
GBAD-301	Perform MC functions	1-43
GBAD-302	Perform MC functions	1-44
GBAD-303	Qualify as MC	1-44
AIC-310	Take appropriate action for an aircraft emergency	1-46
AIC-311	Control a simulated section of fighter aircraft	1-46
AIC-312	Control a simulated section of fighter aircraft	1-47
AIC-313	Control a simulated division of fighter aircraft	1-47
AIC-314	Perform as AIC	1-48
AIC-315	Perform AIC functions from the TAOC radarscope	1-48
AIC-316	Control a section/division of fighter aircraft	1-49
AIC-317	Control a section/division of fighter aircraft	1-49
AIC-318	Control a section of fighter aircraft	1-49
AIC-319	Perform as AIC	1-50
AIC-320	Qualify as AIC	1-50

4. Core Plus Training. Table 1-3 contains a listing of the Core Plus training events and associated page numbers.

Table 1-3.-- Core Plus Training Events.

EVENT	GOAL	PAGE
SWD-400	Conduct tactical planning for the Weapons Section	1-51
SWD-401	Perform as SWD	1-52
SWD-402	Perform as SWD	1-53
SWD-403	Designate as SWD	1-53
SAD-410	Perform system troubleshooting	1-54
SAD-411	Perform as SAD	1-54
SAD-412	Conduct tactical planning for the Command Section	1-54
SAD-413	Perform as SAD	1-55
SAD-414	Perform as SAD	1-56
SAD-415	Perform site emplacement of a TAOC	1-56
SAD-416	Perform as SAD	1-56
SAD-417	Designate as SAD	1-56
SOPS-420	Conduct tactical planning as an SADC Operations Officer	1-57
SOPS-421	Execute the duties of an SADC Operations Officer	1-58
SOPS-422	Designate as an SADC Operations Officer	1-58
SADC-430	Conduct tactical planning as an SADC	1-59
SADC-431	Execute the duties of an SADC	1-60
SADC-432	Designate as SADC	1-61

5. Instructor Training. Table 1-4 contains a listing of the instructor training events and associated page numbers.

Table 1-4.-- Instructor Training Events.

EVENT	GOAL	PAGE
INST-500	Conduct a period of instruction	1-61
INST-501	Brief, monitor, evaluate, and debrief crew position	1-62
AICS-510	Develop instruction techniques	1-63
AICS-511	Instruct section and division tactics	1-63
AICS-512	Instruct, monitor and debrief an AIC	1-64

6. ADCO Core Skills. Core skills and core plus skills are depicted in table 1-5 and directly support the METL for each unit. Core skills shall be a determining factor in developing T&R training requirements. Special skills and training requirements must receive appropriate prioritization and emphasis based on the training need and the likelihood of those types of missions being assigned during operations.

Table 1-5.-- Core and Core Plus Skills.

EVENT CODE	METLS							
	A	B	C	D	E	F	G	H
CORE SKILLS								
SYS-200	X	X	X				X	X
SYS-201	X	X	X					X
SYS-202	X	X	X					X
SYS-203	X	X	X					X
SYS-204	X	X	X					X
SYS-205	X	X	X					X
STD-210	X		X	X				X
STD-211	X		X			X		X
STD-212	X		X			X		X
STD-213	X		X			X	X	X
STD-214	X						X	X
SID-220	X	X					X	X
SID-221	X	X				X	X	X
SID-222	X	X				X	X	X
SID-223	X	X				X	X	X
SID-224	X	X				X	X	X
SID-225	X	X				X	X	X
SID-226	X	X					X	X
SID-227	X	X				X	X	X
SID-228	X	X				X	X	X
SID-229	X	X					X	X
SID-230	X						X	X
SID-231	X						X	X
SID-232	X						X	X
SID-233	X						X	X
GBAD-300	X		X	X	X			X
GBAD-301	X		X	X				X
GBAD-302	X		X	X				X
GBAD-303	X	X	X	X				X
AIC-310	X		X	X				X
AIC-311	X		X	X				X
AIC-312	X	X	X	X				X
AIC-313	X	X	X	X				X
AIC-314	X	X	X	X				X
AIC-315	X	X	X	X				X
AIC-316	X	X	X	X				X
AIC-317	X	X	X	X				X
AIC-318	X	X		X				X
AIC-319	X	X		X				X
AIC-320	X	X		X				X

Table 1-5.-- Core and Core Plus Skills--Continued.

EVENT CODE	METLS							
	A	B	C	D	E	F	G	H
CORE PLUS SKILLS								
SWD-400	X	X			X		X	X
SWD-401	X	X			X			X
SWD-402	X	X			X			X
SWD-403	X	X			X			X
SAD-410	X	X	X	X	X	X		X
SAD-411	X	X	X	X	X	X		X
SAD-412	X	X	X	X	X	X		X
SAD-413	X	X	X	X	X	X		X
SAD-414	X	X	X	X	X	X		X
SAD-415	X							X
SAD-416	X	X	X	X	X	X		X
SAD-417	X	X	X	X	X	X		X
SOPS-420	X	X	X	X	X	X		X
SOPS-421	X	X	X	X	X	X		X
SOPS-422	X	X	X	X	X	X		X
SADC-430	X	X	X	X	X	X		X
SADC-431	X	X	X	X	X	X		X
SADC-432	X	X	X	X	X	X		X
AICS 510				X				
AICS 511				X				
AICS 512				X				

103. UNIT TRAINING POLICIES

1. The unit's training program emphasizes qualifications and overall combat readiness of the unit. Individual training serves as the building block for overall unit readiness. However, unit training will never be compromised to train few individuals. Squadron and battalion commanding officers will ensure this training philosophy is implemented. Unit training must predominate and squadrons must tailor their training plans to ensure unit combat readiness.

2. The training of Marines to perform as an integral aviation unit in combat lies at the heart of the T&R program. Unit readiness and individual readiness are directly related. Individual training and the mastery of individual core skills serve as building blocks for unit combat readiness. A Marine's ability to perform those critical skills required in combat is essential.

3. Commanders shall ensure all tactical training is conducted to a MCCRES standard. The MCCRES, as outlined in MCO P3501.1, is the unit training standard and all syllabus events shall be tailored to meet MCCRES requirements. Commanders at all levels are responsible for effective aviation training. The conduct of training in a professional manner consistent with Marine Corps standards cannot be over emphasized.

4. Commanders must be cognizant of the numerous factors affecting unit training on a daily basis. Factors which all commanders must address include, but are not limited to:

a. Efficiency. Time and resources expended are measurements for training efficiency. Commanders must ensure all training increases combat readiness. Unit personnel shall thoroughly plan and effectively execute training to maximize return on their time and effort.

b. Individual Differences. Commanders must recognize the differences inherent in each individual and should mold flexible training programs to accommodate those differences.

c. Decentralization of Training. The lowest echelon possible shall be responsible for conducting training. Each senior level of command must monitor subordinate commands to ensure safe and efficient training requirements.

5. Commanders shall provide personnel the opportunities to attend formal and operational level courses of instruction as required by this manual. Attendance at all formal courses must enhance the warfighting capabilities of the unit.

6. Risk Management. Operational Risk Management (ORM) is a process to aid commanders in accomplishing their missions while protecting the force. Commanders, leaders, maintainers, planners and schedulers should integrate risk assessment in the decision making process and implement hazard controls to eliminate risk or reduce it to acceptable level.

7. MACCS Integrated System Training. All elements of the MACCS shall maintain the capability to effectively function as part of an integrated airspace command and control system. In that, large exercises may not always offer sufficient training opportunity for all crewmembers and in many cases do not offer sufficient latitude to refine capability upon arrival. The MACCS should conduct MACCS Integrated System Training Exercises (MISTEX) on a regular basis to qualify units and personnel per their respective T&R syllabus. MISTEXs should focus on the establishment of necessary communications and data links between MACCS agencies, and incorporate sufficient simulation and MSEL items to exercise and analyze system integration, crew coordination, and critical information flow wherever possible. Tactical data link capable agencies should conduct frequent "link" training exercises to maintain proficiency.

8. Instructor/Evaluators. Commanders must ensure training is conducted with proper instructor/evaluator support. **All operators who are not qualified shall have a dedicated instructor when performing syllabus training. No more than 50% of any one section of a TAOC crew can be comprised of student operators.**

104. ADCO TRAINING PROGRESSION PHILOSOPHY. The purpose of this syllabus is to develop and refine those skills required for the ADCO to function in a director position within a core capable TAOC crew. The progression of the ADCO through the syllabus has been tailored towards that end by combining events into director position training. With the focus on director training

and the resulting reduction in the number of required events, it is incumbent upon the squadron commander to ensure each event is completed in accordance with each performance standard established for that event.

105. TRAINING PROGRESSION MODEL FOR ADCO

1. The Training Progression Model for the Air Defense Control Officer (ADCO) is depicted in figure 1-1.

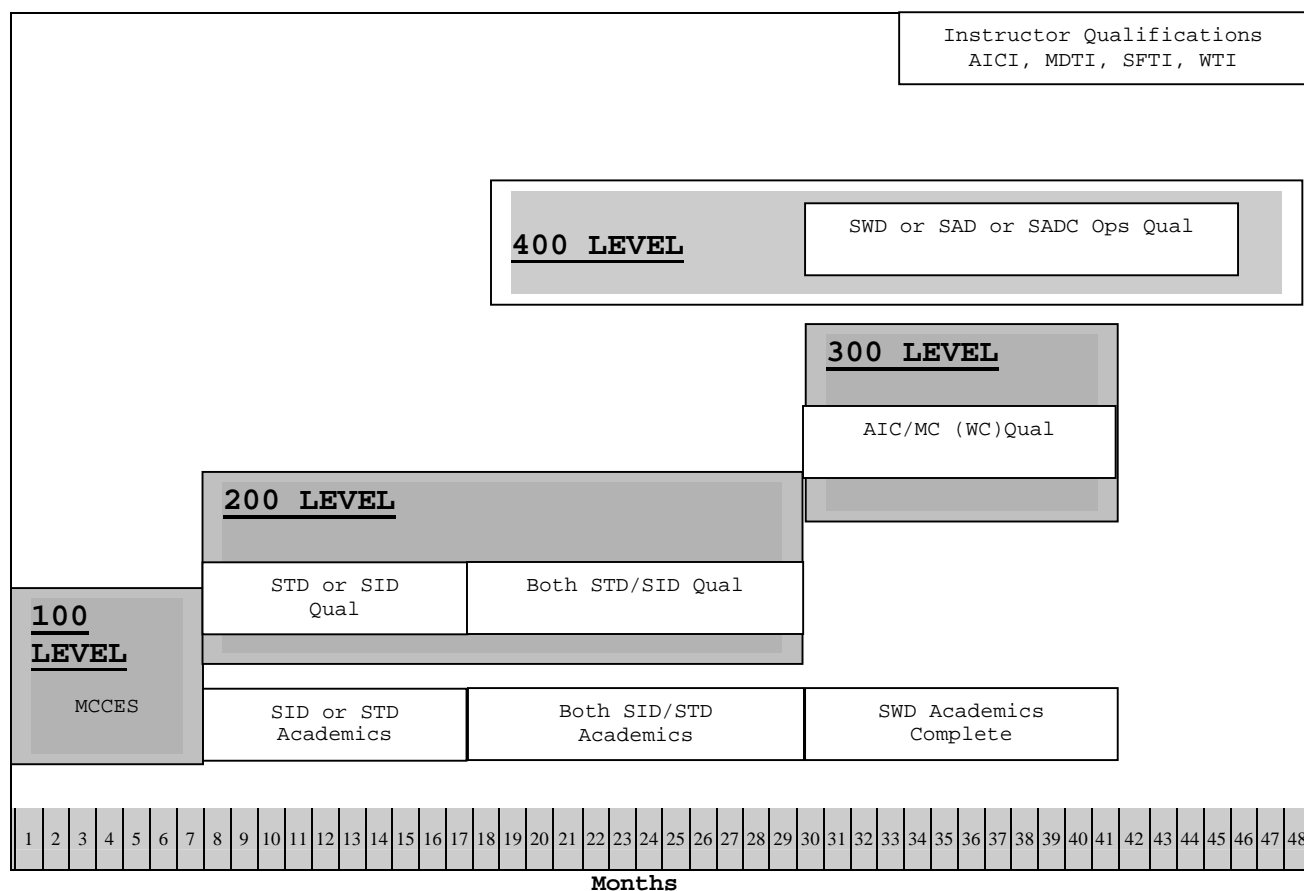


Figure 1-1.-- Air Defense Control Officer (ADCO) Training Progression Model.

2. This model depicts the **logical progression of qualifications** within a unit. The base of each model contains the "initial" qualifications an individual receives after completion of the MOS-qualifying school. The highest level of the progression model contains those qualifications held by only the most experienced personnel within a unit.

3. The Core Skill Introduction phase, or 100 level events, is completed at the Air Defense Control Officers Course (ADCOC), MCCES, 29 Palms, CA. Upon completion of ADCOC, the officer is assigned the 7210 MOS designation.

4. The Core Skill Basic phase, or 200 level events, moves an ADCO from a basic understanding of core skills to proficiency in basic core skills. This phase is normally accomplished during the first two years of assignment to an operational unit. Significant training for this stage includes qualifying as

an STD and SID. The STD or SID qualification should be completed during the first year. Training in this phase does not preclude simultaneous training in the Core Skill Advanced phase.

a. Surveillance Identification Director (SID) Designation. An ADCO is SID designated after completing required events in the Core Skill Basic phase of the appropriate T&R syllabus. The ADCO shall be certified by a TAOC SAD, TAOC WTI, or the MAWTS-1 TAOC instructor and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Senior Traffic Director (STD) Designation. An ADCO is STD designated after completing required events in the Core Skill Basic phase of the appropriate T&R syllabus. The ADCO shall be certified by a TAOC SAD, TAOC WTI, or the MAWTS-1 TAOC instructor and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

5. The Core Skill Advanced phase, or 300 level events, contains advanced core skill training. Significant training includes completion of AIC and MC syllabi and WC designation. An ADCO is WC designated after completing required events in the Core Skill Advanced phase of the appropriate T&R syllabus. The ADCO shall be certified by a qualified TAOC SAD, AICI and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

6. The Core Plus phase, or 400 level events, contains skill training an ADCO may accomplish. These events are typically completed during a second tour but does not preclude training at the 400 level during the first tour.

a. Senior Weapons Director (SWD) Designation. An ADCO is SWD designated after completing required events in the Core Plus skills of the appropriate T&R syllabus. The ADCO shall be certified by a TAOC SAD, TAOC WTI, or the MAWTS-1 TAOC instructor and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Senior Air Director (SAD) Designation. An ADCO is SAD designated after completing required events in the core plus skills of the appropriate T&R syllabus. The ADCO shall be certified by a TAOC SAD, TAOC WTI or the MAWTS-1 TAOC instructor and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

c. Sector Air Defense Commander (SADC) Operations (OPS) Officer Designation. An ADCO is SADC OPS designated after completing required events of the appropriate T&R syllabus. The ADCO shall be certified by a designated SADC or the MAWTS-1 TAOC instructor and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

d. Sector Air Defense Commander (SADC) Designation. An officer (MOS 7202) is SADC designated after completing required events of the appropriate T&R syllabus. The officer shall be certified by a designated SADC or the MAWTS-1 TAOC instructor and designated by the commanding officer.

7. The unit's training progression model provides training officers with a valuable tool to develop training plans. With a clear progression model and an emphasis on qualifying personnel in Core Skill Introduction and Core Skill Basic phases, training officers have the ability to produce viable training plans. Units will use the model as a point of departure to generate weekly, monthly, quarterly and annual training plans.

106. PROGRAMS OF INSTRUCTION (POI) FOR ADCO

1. Basic ADCO

<u>WEEKS</u>	<u>COURSE</u>	<u>ACTIVITY</u>
13	Air Defense Control Officers Course (ADCOC)	MCCES

2. ADCO transition and refresher training will be accomplished at the MACSS.

107. INSTRUCTOR DESIGNATIONS

1. Instructor (INST) Designation. An ADCO is INST designated after completing required events of the appropriate T&R syllabus, with the exception of Air Intercept Control Instructor (AICI). The ADCO will be certified by a TAOC WTI and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

2. Air Intercept Control Supervisor (AICS) Designation. An ADCO is designated an AICS after completing required events of the appropriate T&R syllabus. The ADCO will be certified by an AICI and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

110. GROUND/ACADEMIC TRAINING

1. Academic training will be conducted for each phase/stage of the syllabus. Commanders will incorporate the lectures in table 1-6 into the training plans. Where indicated, standardized academic training materials exist and may be obtained from the activity listed as the sponsor.

Table 1-6.-- MACCS Required T&R Lectures.

LECTURE CODE	LECTURE TITLE	SPONSOR
200 LEVEL: CORE SKILL BASIC		
A-01	MAGTF Organization	MCCES
A-02	MACCS Organization	MCCES
A-03	The Six Functions of Marine Aviation - Control of Aircraft & Missiles - Offensive Air Support - Assault Support - Electronic Warfare - Aerial Reconnaissance - Anti-Air Warfare	MAWTS-1 ASP
A-04		MAWTS-1 ASP
A-05		MAWTS-1 ASP
A-06		MAWTS-1 ASP
A-07		MAWTS-1 ASP
A-08		MAWTS-1 ASP
A-09	Air Tasking Order/Special Instructions	MCCES
A-10	MACCS Training Management	MCCES
A-11	MACCS Reference Material	MCCES
A-12	Local AOR Contingencies & OPLANS	Local MACG
A-13	ROE Overview	MAWTS-1 ASP
A-14	MACCS Communications	MAWTS-1 ASP
A-15	TBMCS Overview	MAWTS-1 ASP
A-16	Data Link Symbology	MCCES
A-17	Manual Crosstell procedures	MCCES
A-18	Encryption & Authentication Procedures	MCCES
A-19	COMSEC & Crypto handling	MCCES
300 LEVEL: CORE SKILL ADVANCED		
B-01	ASM/SSM Threat	MAWTS-1 ASP
B-02	Fixed Wing Threat	MAWTS-1 ASP
B-03	Rotary Wing Threat	MAWTS-1 ASP
B-04	REC Threat	MAWTS-1 ASP
B-05	Ground Threat	MAWTS-1 ASP
B-06	AOR Specific Threat & OPLANS	Local MACG
B-07	TACC	MAWTS-1 ASP
B-08	TAOC	MAWTS-1 ASP
B-09	DASC	MAWTS-1 ASP
B-10	ATC Detachment	MAWTS-1 ASP
B-11	MAGTF GBAD	MAWTS-1 ASP
B-12	MWCS	MAWTS-1 ASP
B-14	AEW	MAWTS-1 ASP
B-15	MACCS/Joint Data link	MAWTS-1 ASP
B-16	USMC Aviation Ordnance	MCCES
B-17	Phasing Control Ashore	MAWTS-1 ASP
B-18	Airspace Planning/Management (Combat Airspace)	MAWTS-1 ASP
B-19	Tanker Management	MAWTS-1 ASP
B-20	Armed Reconnaissance	MAWTS-1 ASP
B-21	UAV Programs & Integration	MAWTS-1 WTI *

Table 1-6.-- MACCS Required T&R Lectures--Continued.

LECTURE CODE	LECTURE TITLE	SPONSOR
B-22	Link Architecture & Procedures	MAWTS-1 WTI *
B-23	CSAR/TRAP	MAWTS-1 ASP
B-24	NEO Execution	MAWTS-1 ASP
B-25	Execution Checklist	MAWTS-1 WTI *
400 LEVEL: CORE PLUS		
C-01	Integrated Combat Airspace Command & Control (ICAC ²)	MAWTS-1 ASP
C-02	Joint Air Operations	MAWTS-1 ASP
C-03	Theater Missile Defense	MAWTS-1 WTI *
C-04	MACCS in support of Special Operations	MAWTS-1 WTI *
C-05	ROE Development	MAWTS-1 WTI *
C-06	SIS Aircraft	MAWTS-1 ASP
C-07	JTAO Procedures	MCCES

(*) The lecture code is standardized throughout all MACCS related syllabi, and is used to link ATRIMS software to a specific T&R event within this syllabus. Lecture codes may not be listed sequentially.

2. Academic training listed in table 1-7 contains TAOC specific T&R lectures required for personnel assigned to a TAOC. Units will use standardized terminal and enabling learning objectives (TLOs and ELOs) as basis for all T-code lecture development. MAWTS-1, as the T&R sponsor, maintains and updates T-code lecture TLOs/ELOs for standardization.

Table 1-7.-- TAOC Required T&R Lectures.

CODE	CLASS TITLE
T-01	AAW ANTI-AIR WARFARE DOCTRINE
T-02	ADC RESPONSIBILITIES
T-03	AI CONTROL/TACTICAL TERMINOLOGY
T-04	AIR DEFENSE COMMUNICATIONS PLATFORM
T-05	AIRSPACE MANAGEMENT
T-06	ATACC REQUIREMENTS
T-07	ATDL-1
T-08	ATOs AND FRAGs
T-09	BRIEFING & DEBRIEFING FOR THE AIC
T-10	C&M PANEL
T-11	C4I SYSTEMS
T-12	CAP MANAGEMENT
T-13	COMMUNICATIONS BREVITY
T-14	CREW COORDINATION
T-15	DATA LINK TROUBLESHOOTING
T-16	EMCON PLANNING AND IMPLEMENTATION
T-17	EMERGENCY PROCEDURES
T-18	EP CAPABILITIES
T-19	FIGHTER MISSIONS
T-20	FIRE SUPPORT COORDINATION MEASURES

Table 1-7.-- TAOC Required T&R Lectures--Continued.

CODE	CLASS TITLE
T-21	FLIGHT SUPERVISORS BRIEFING & DEBRIEFING PROCEDURES
T-22	GBAD VOICE CONTROL PROCEDURES
T-23	GBDL
T-24	IADS EMPLOYMENT
T-25	IDENTIFICATION PROCEDURES
T-26	INTERCEPT CONTROL
T-27	INTERFACE COORDINATION
T-28	JOINT CLOSE AIR SUPPORT
T-29	JRCC OPERATIONS
T-30	JTAO DATA LINK OPERATIONS
T-31	LINK OPS MESSAGES
T-32	MACCS INFORMATION FLOW
T-33	MANUAL CROSSTELL
T-34	NATIONAL SYSTEMS DATA
T-35	OPPLANS AND OPORDS
T-36	PHASE CONTROL
T-37	RADAR EMPLOYMENT & PERFORMANCE
T-38	RADIO SETUP
T-39	RADIO SETUP, REPP/SEPP
T-40	REMOTE RADAR
T-41	RULES OF ENGAGEMENT
T-42	SCC RESPONSIBILITIES
T-43	SENSOR REGISTRATION
T-44	SIM SCENARIO EXECUTION
T-45	SIM SCENARIO GENERATION
T-46	SURVEILLANCE BRIEF
T-47	SURVEILLANCE COMMUNICATIONS
T-48	SURVEILLANCE SECTION RESPONSIBILITIES
T-49	SWD COORDINATION REQUIREMENTS
T-50	SYSTEM ECHELON
T-51	SYSTEM TROUBLESHOOTING
T-52	T&R PROGRAM
T-53	TADIL A
T-54	TADIL B/NATO LINK 1
T-55	TADIL C
T-56	TADIL J
T-57	TANKER MANAGEMENT
T-58	TAOC COMMUNICATIONS
T-59	TAOC CREW BRIEF
T-60	TAOC DATLINK CAPABILITIES
T-61	TAOC EMPLOYMENT & POWER REQUIRMENTS
T-62	TAOC REPORTS & FORMATS
T-63	TBMCS
T-64	TDC RESPONSIBILITIES
T-65	TDS PLATFORMS
T-66	THEATER AIR GROUND SYSTEMS
T-67	THEATER MISSILE DEFENSE

Table 1-7.-- TAOC Required T&R Lectures--Continued.

CODE	CLASS TITLE
T-68	THREAT AIRCRAFT
T-69	THREAT GROUND AND NAVAL FORCES
T-70	THREAT MISSILES
T-71	THREAT TACTICS
T-72	TRAFFIC BRIEF
T-73	TRAFFIC COMMUNICATIONS
T-74	TRAFFIC SECTION RESPONSIBILITIES
T-75	TRAP TACTICAL RECOVERY OF AIRCRAFT AND PERSONELL
T-76	US/ALLIED AIRCRAFT
T-77	US/ALLIED GROUND AND NAVAL FORCES
T-78	US/ALLIED MISSLES
T-79	WEAPONEERING
T-80	WEAPONS AIRSPACE MANANGEMENT
T-81	WEAPONS BRIEF
T-82	WEAPONS COMMUNICATIONS
T-83	WEAPONS CONTROL FROM TAOC RADARS
T-84	WEAPONS DATA LINK ORDERS
T-85	WEAPONS MODES OF OPERATIONS
T-86	WEAPONS SECTION RESPONSIBILITIES
T-87	WEATHER

3. External academic courses of instruction available to complete the syllabus are listed below.

COURSE	ACTIVITY
Weapons and Tactics Instructors (WTI) Course	MAWTS-1
Multi-TDL Advanced Joint Interoperability Course (MAJIC)	JMTS
JTIDS Course	JMTS
Joint Interface Control Officer (JICO) Course	JMTS
Link-16 Planner Course	JMTS
Military Airspace Management Course	Keesler AFB
Joint Air Tasking Order Process (JATOP) Course	C2WS
Air Operations Center Initial Qual Training (AOC IQT)	C2WS
Plans/Ops Technician Training	C2WS
Marine Division Tactics Course (MTDC)	MAWTS-1

4. The academic syllabus sponsor will conduct an annual academic syllabus review.

111. TRAINING REFERENCES

1. Training references in tables 1-8 through 1-12 shall be utilized to ensure safe and standardized training procedures, performance steps, grading criteria and equipment operation.

Table 1-8.-- Joint Publications.

PUBLICATION	TITLE	SECTION
ACP-125	Allied Communication Publication	SADF, CMD
CJCSI 3121.01A	Standing Rules of Engagement for US Forces	SADC, SADC OPS, SAD, WEPS
CJCSI 3320.03	Joint Communications Electronics Operation Instructions	SADF, CMD
CJCSI 6232.01A	Deconflicting JTIDS/MIDS Operations	SURV
CJCSI 6240.01A	Training Responsibilities for the Joint Tactical Air Operations Interface Program	CMD, INTSR
CJCSM 3115.01	Joint Data Network (JDN) Operations	SURV, SCC
CJCSM 6120.01A	Joint Multi-Tactical Digital Information Link (TADIL) Operating Procedures	SURV, SCC
CJCSM 6120.05	Manual for Tactical Command and Control Planning Guidance for Joint Operations, Joint Interface Operational Procedures for Message Text Formats	CMD
CJCSM 6230.05	Joint Have Quick Planner's Guide - Joint Employment Guidance	CMD
JP 1	Joint Warfare of the Armed Forces	SADC, CMD
JP 0-2	Unified Actions of Armed Forces (UNAAF)	SADC
JP 3-0	Doctrine for Joint Operations	SADC, CMD
JP 3-01	Joint Doctrine for Countering Air and Missile Threats	SADC, SADC OPS, SAD, WEPS
JP 3-01.2	Joint Doctrine for Theater Counter air Operations	SADC, SADC OPS, SAD, SWD
JP 3-01.4	Joint Tactics, Techniques, and Procedures (JTTP) for Joint Suppression of Enemy Air Defense	SADC, SADC OPS, SAD, SWD, STD
JP 3-01.5	Doctrine for Joint Theater Missile Defense	SADC, SADC OPS, SAD, SWD
JP 3-02	Joint Doctrine for Amphibious Operations	SADC, SADC OPS, SAD
JP 3-03	Doctrine for Joint Interdiction Operations	SADC, SADC OPS, SAD
JP 3-09	Doctrine for Joint Fire Support	SADC, SADC OPS
JP 3-09.3	JTTP for Close Air Support (CAS)	SADC, SADC OPS, SAD, STD
JP 3-13	Joint Doctrine for Information Operations	SADF, CMD
JP 3-13.1	Joint Doctrine for Command and Control Warfare (C2W)	SADF, CMD
JP 3-30	Command and Control for Joint Air Operations	SADC, SADC OPS, CMD
JP 3-50.2	Doctrine for Joint Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF
JP 3-50.21	Joint Tactics, Techniques, and Procedures for Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF

Table 1-8.-- Joint Publications--Continued.

PUBLICATION	TITLE	SECTION
JP 3-51	Joint Doctrine for Electronic Warfare	SADC, SADC OPS, CMD
JP 3-52	Doctrine for Joint Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
JP 5-0	Doctrine for Planning Joint Operations	SADC, SADC OPS, CMD
JP 6-0	Doctrine for C4 Systems Support to Joint Operations	SADC, SADC OPS, CMD, SCC
JP 6-02	Doctrine for Employment of Operational/Tactical C4 Systems	SADC, SADC OPS, CMD, SCC
	Joint Tactical Air Operations (JTAO) Interface Training Reference Notebook	SAD, SURV, INSTR
	JTAO Interface Interoperability Handbook	SAD, SURV
	Executive Guide to the JTAO Interface	SADC, SADC OPS
	JTAO Interface Training Plan	SADC, SADC OPS, CMD
	JTAO Computer-Based Training (CBT) Modules	All
	JTAO Video Training Tapes	All
	Understanding Data Links	SADC, SADC OPS, CMD, SURV
	Understanding Link 4A/11/16	SADC, SADC OPS, CMD, SURV

Table 1-9.-- Marine Corps Publications.

PUBLICATION	TITLE	SECTION
MCDP 1	Warfighting	All
MCDP 1-1	Strategy	SADC, CMD
MCDP 1-2	Campaigning	SADC, SADC OPS, CMD
MCDP 1-3	Tactics	SADC, SADC OPS, CMD
MCDP 2	Intelligence	SADC, SADC OPS, CMD
MCDP 3	Expeditionary Operations	SADC, SADC OPS, CMD
MCDP 4	Logistics	SADC, SADC OPS, CMD
MCDP 5	Planning	SADC, SADC OPS, CMD
MCDP 6	Command and Control	SADC, SADC OPS, CMD
MCWP 1-0	Marine Corps Operations	All
MCWP 2-1	Intelligence Operations	SADC, SADC OPS, CMD
MCRP 2-11B	Joint STARS	SADC, SADC OPS, SAD, SWD
MCRP 2-12A	IPB	SADC, SADC OPS, CMD
MCRP 3-0A	Unit Training Management Guide	SADC, SADC OPS, CMD, INSTR
MCRP 3-0B	How to Conduct Training	SADC, SADC OPS, CMD, INSTR

Table 1-9.-- Marine Corps Publications--Continued.

PUBLICATION	TITLE	SECTION
MCRP 3-0A	Unit Training Management Guide	SADC, SADC OPS, CMD, INSTR
MCRP 3-0B	How to Conduct Training	SADC, SADC OPS, CMD, INSTR
MCWP 3-16	Fire Support Coordination in the Ground Combat Element	SADC, SADC OPS, SAD
MCRP 3-16.14	TTP for Targeting	SADC, SADC OPS, SAD
MCRP 3-16C	Fire Support for the Combined Arms Commander	SADC, SADC OPS, SAD
MCWP 3-2	Aviation Operations	All
MCWP 3-22	Anti-Air Warfare	All
MCRP 3-22.2	Suppression of Enemy Air Defenses	All
MCWP 3-23	Offensive Air Support	All
MCWP 3-23.1	Close Air Support	All
MCWP 3-23.2	Deep Air Support	All
MCWP 3-24	Assault Support	All
MCWP 3-25	Control of Aircraft and Missiles	All
MCRP 3-25A	Multi-Service Procedures for JATC	SADC, SAD, TRAF
MCRP 3-25B	Multi-Service Brevity Codes	All
MCRP 3-25C	Intro to TADIL-J and Quick Reference Guide	SADC, SADC OPS, SAD, SID, DLC
MCWP 3-25D	Integrated Combat Airspace Command and Control (ICAC2)	SADC, SADC OPS, CMD, TRAF
MCWP 3-25.2	Multi-service Procedures for the Theater Air-Ground System (TAGS)	All
MCWP 3-25.3	MACCS Handbook	All
MCWP 3-25.4	Marine TACC Handbook	All
MCRP 3-25.4A	JAOC/AAMDC Coordination	SADC, SADC OPS, SAD, SWD
MCWP 3-25.5	DASC Handbook	All
MCWP 3-25.6	SAAWC Handbook	All
MCWP 3-25.7	TAOC Handbook	All
MCWP 3-25.8	MATCD Handbook	All
MCWP 3-25.9	MACCS Communications Handbook	All
MCWP 3-25.10	LAAD Battalion Handbook	All
MCRP 3-25.10A	Low Altitude Air Defense (LAAD) Gunner's Handbook	CMD
MCWP 3-26	Air Reconnaissance	All

Table 1-9.-- Marine Corps Publications--Continued.

PUBLICATION	TITLE	SECTION
MCWP 3-31.1	Supporting Arms in Amphibious Ops	All
MCWP 3-35.3A	MTTP Procedures for Aviation Urban Operations	SADC, SADC OPS, SAD
MCWP 3-36	Information Operations	All
MCWP 3-36.1	Electronic Warfare	All
MCWP 3-37	MAGTF NBC Defense Operations	All
MCRP 3-37A	NBC Field Handbook	All
MCWP 3-37.2	NBC Protection	All
MCWP 3-41.1	Rear Area Operations	All
MCWP 3-42.1	Fire Support in MAGTF Operations	SADC, SADC OPS, SAD
MCWP 5-1	Marine Corps Planning Process	SADC, SADC OPS, CMD
MCRP 5-2A	Operational Terms and Graphics	SADC, SADC OPS, CMD, SADFCC, SADFO
MCWP 6-2	MAGTF C2	SADC, SADC OPS, CMD
MCWP 6-22	Communications and Information Systems	SADC, SADC OPS, CMD
MCWP 6-23	MAGTF Information Management	SADC, SADC OPS, CMD
MCRP 6-2.1.2	Tactical Brevity Codes	All
MCO 3501.9B	Marine Corps Combat Readiness Evaluation System (MCCRES)	All
TM 08565B-10/1	Operating Instructions-TAOM AN/TYQ-23(V)4	All
TM 11240 Series	Motor Transport Technical Characteristics	SAD, SCC
	DASC Pocket Checklist	CMD
	TAOC Pocket Checklist	All

Table 1-10.-- Navy Publications.

PUBLICATION	TITLE	SECTION
NWP 3-01.01	Anti-Air Warfare	All
NWP 3-01.10	Anti-Air Warfare Commander's Manual	SADC, SADC OPS, SAD, WEPS
NTTP 3-01.5	AEGIS Core Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-20.4	Surface Warfare Aviation Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-22.5	F/A-18 A/B Tactical Manual	SADC, SADC OPS, SAD, WEPS, AICI
OPNAVINST 3710	NATOPS Manual	SADC, SADC OPS, CMD
	TOPGUN Manual	SADC, SADC OPS, SAD, WEPS, AICI

Table 1-11.-- Air Force Publications.

PUBLICATION	TITLE	SECTION
AFDD 2-1	Air Warfare	SADC, SADC OPS, CMD
AFDD 2-1.1	Counterair Operations	SADC, SADC OPS, CMD
AFDD 2-1.3	Counterland	SADC, SADC OPS, CMD
AFDD 2-1.6	Combat Search and Rescue	SADC, SADC OPS, CMD
AFDD 2-1.7	Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
AFDD 2-8	Command and Control	SADC, SADC OPS, CMD
ACH-JFACC	Aerospace Commander's Handbook (ACH): The JFACC	SADC, SADC OPS, CMD, TRAF
ATTP 3-1 Vol. 1	General Planning and Employment Considerations	All
ATTP 3-1 Vol. 2	Threat Reference Guide	All
ATTP 3-1 Vol. 14	Air Defense	All
ATTP 3-1 Vol. 15	Tactical Employment -AWACS	All
ATTP 3-1 Vol. 26	Theater Air Control Systems	All

Table 1-12.-- Army Publications.

PUBLICATION	TITLE	SECTION
FM 27-10	Law of Land Warfare	SADC, SADC OPS, CMD
FM 44-8	Combined Arms For Air Defense	SADC, SADC OPS, WEPS
FM 44-18	Air Defense Employment: Stinger	SADC, SADC OPS, WEPS
FM 44-18-1	Stinger Team Operations	SADC, SADC OPS, WEPS
FM 44-44	Avenger Platoon, Section, And Squad Operations	SADC, SADC OPS, WEPS
FM 44-85	Patriot Battalion and Battery Operations	SADC, SADC OPS, WEPS
FM 44-94	Army Air and Missile Defense Command Operations	SADC, SADC OPS, WEPS
FM 44-100	US Army Air And Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-12	Army Theater Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-103	Army Airspace Command and Control in a Combat Zone	SADC, SADC OPS, CMD, TRAF

120. LIVE/SIMULATOR EVENT TRAINING: AIR DEFENSE CONTROL OFFICER1. **Core Skill Introduction Phase**

STAGE	EVENTS	HOURS	PERCENT
ADCOC MCCES			60.00%

2. **Core Skill Basic Phase**

STAGE	EVENTS	HOURS	PERCENT
SYSTEM TRAINING	6	13.5	1.80%
SENIOR TRAFFIC DIRECTOR TRAINING	5	36	6.60%
SURVEILLANCE IDENTIFICATION DIRECTOR TRAINING	14	104	6.60%
TOTALS:	25	153.5	15.00%

3. **Core Skill Advanced Phase**

STAGE	EVENTS	HOURS	PERCENT
GROUND BASED AIR DEFENSE TRAINING	4	22	5.00%
AIR INTERCEPT CONTROL TRAINING	11	39	15.00%
TOTALS:	15	61	20.00%

4. **Core Plus Phase**

STAGE	EVENTS	HOURS	PERCENT
SENIOR WEAPONS DIRECTOR TRAINING	4	40	1.25%
SENIOR AIR DIRECTOR TRAINING	8	96	2.25%
SECTOR AIR DEFENSE COMMAND OPERATIONS OFFICER	3	40	.75%
SECTOR AIR DEFENSE COMMANDER TRAINING	3	40	.75%
TOTALS:	18	216	5.00%

5. **Instructor Phase**

STAGE	EVENTS	HOURS	PERCENT
INSTRUCTOR/EVALUATOR TRAINING	2	10	0.00%
AIR INTERCEPT CONTROL INSTRUCTOR TRAINING	3	28	0.00%
TOTALS:	5	38	0.00%
ADCO T&R SYLLABUS TOTALS:	63	468.5	100.00%

130. LIVE/SIMULATOR EVENT PERFORMANCE REQUIREMENTS

1. **General.** The majority of the ADCO syllabus is ground training that requires in-depth integration within the MACCS. Likewise, development of MAGTF training involving extensive integration with applicable elements of the MAGTF is mandatory in the development of a core competent ADCO.

a. **Live Training.** Training event condition codes listed as **L** (live), **L/S** (live preferred/simulator optional) in this syllabus designate training to be conducted without the aid of simulator devices. Training not conducted in the live training environment shall be replaced with simulation where applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to the individual, crew and agency training.

b. **Simulator Training.** Training event condition codes listed as **S** (simulator), and **S/L** (simulator preferred/live optional) in this syllabus designate training to be conducted in the Tactical Air Operations Module (TAOM) and the Sector Air Defense Facility (SADF) where applicable. Training not conducted in the TAOM or SADF shall be replaced with live training where

applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to the individual, crew, and agency training.

2. Minimum Performance Time for Syllabus "Write-Off"/Designations.

Personnel may receive credit for successful completion of any syllabus requirement/performance standards (except qualifications) upon either a written, oral or practical demonstration of proficiency at the commanding officer's discretion. Completion of 80 percent of any syllabus event (except qualifications) may be "written-off" as complete at the discretion of the designated evaluator. Qualifications require a completed performance evaluation, and the designation signed by the commanding officer. *Check guidance in Aviation T&R Manual.*

3. Evaluation of Training. Evaluation of those portions of the syllabus which are academic in nature will be conducted by either written/oral examination or a combination of the two means. Operational and system related subjects will be evaluated by practical application means whenever possible. Performance evaluation to qualify for mission qualifications and designations will be conducted per the Aviation T&R Program Manual, and the standardized evaluation forms located in appendix A to this syllabus.

131. COMPONENTS OF A T&R EVENT. An event contained within a T&R Manual is an individual or collective training standard and contains seven or eight components, dependent on the tier in which they are contained. Components not required are omitted.

1/ SAM-XXX	2/ 0.5	3/ T,C,R, E	4/ E	5/ EQUIP	6/ L/S (NS)
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Goal. The title of a unit of work that needs to be done in the performance of a Marine's duties. It is a clearly stated performance-oriented action requiring learned skills and knowledge (i.e. Engage a rotary winged aircraft).

Requirement. The condition(s) set for the real world or combat circumstances in which the tasks are to be performed. They indicate what is provided (equipment, tools, materials, manuals, aids, etc.), environmental constraints or conditions under which the task is performed, and any specific cues or indicators to which the performer must respond. When resources or safety requirements limit the conditions, this should be stated.

Performance Standard. The performance standard indicates the basis for judging the effectiveness of the performance. It consists of a carefully worded statement that identifies the proficiency level expected when the goal is performed. It is not guidance; it is the standard that will be performed prior to completion. Performance standards are specified in terms of accuracy, speed, sequencing, quality of performance, adherence to procedural guidelines, etc.

Prerequisite. Provides a listing of academic training or other T&R events that must be completed prior to satisfying the task.

External Syllabus Support. A listing or description of the external support requirements that may be required to satisfy completion of the task. May include range requirements, support aircraft, targets, training devices, or other personnel and equipment.

- NOTES 1/ Events are coded per appendix B of Aviation T&R Program Manual.
- 2/ Projected event duration is furnished as a planning tool.
- 3/ Denotes the applicable Program of Instruction (Basic POI is understood).
- 4/ An "E" indicates an Evaluated event.
- 5/ Equipment or activity subcategory is listed
- 6/ Condition Code: L = live Training; S = simulator training; L/S = live preferred/simulator optional; S/L = simulator preferred/live optional; where contained within () denotes optional conditions.

132. CORE SKILL INTRODUCTION TRAINING. Core Skill Introduction training (100 level) is conducted during the ADCOC at MCCES, 29 Palms, CA. The 100 level T&R syllabus can be located at www.29palms.usmc.mil/mcces.

1. System Training

a. Purpose. To refine ADCO skills required for trouble shooting and maintaining the TAOM system and to provide a means for the ADCO to remain current.

b. General

(1) Administrative Notes. Core Skill Introduction training must be completed prior to beginning Core Skill Basic phase. The POI number for the Core Skill Introduction training syllabus is N0972M1.

(2) Prerequisites. Grade of 2nd Lieutenant through Captain, normal color vision, and a secret clearance.

(3) Refresher Training. Refresher training is not used in the 100 level syllabus.

c. Crew Requirements. None.

d. Academic Training. Academic training will be conducted prior to and concurrent with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (X Events, X.X Hours)

FAM 100	11.5	E	TAOC	L
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Goal. Introduce basic MACS functions.

Requirement. Describe basic MACS functions per applicable references to include annex A of the Air Defense Training Section POI Course ID M0972M1.

Performance Standards. Pass a written test with a minimum score of 80%.

Prerequisite. None.

External Syllabus Support. None.

SYS 101	44.0	E	TAOC	L
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Goal. Perform system level functions.

Requirement. Given an operational TAOM perform system level functions per applicable references to include annex A of the Air Defense Training Section POI Course N0972M1.

Performance Standards. Complete each of the following with 80% accuracy:

- (1) Apply power to a TAOM.
- (2) Setup Operator Console Unit (OCU) workstation.
- (3) Initiate a Program Load (IPL).
- (4) Load a DB (DB).
- (5) Enter system level DB entries.
- (6) Modify system level DB entries.
- (7) Setup radios for voice communications.
- (8) Enter DB for voice communications.
- (9) Modify DB for voice communications.
- (10) Communicate within a TAOC.
- (11) Setup the Voice Communications Access System (VCAS).
- (12) Communicate via voice with an external station.
- (13) Respond to an alert.
- (14) Recognize a system fault.
- (15) Locate a failed item.
- (16) Cable a TAOC into a multiple TAOM configuration.

Prerequisite. None.

External Syllabus Support. None.

SID 100	3.75	E	TAOC	L
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Goal. Introduce surveillance functions.

Requirement. Given an operational TAOM, perform surveillance functions per applicable references to include annex B of the Air Defense Training Section POI Course ID M0972M1.

Performance Standards. Complete each of the following with 80% accuracy:

- (1) Conduct a surveillance brief.
- (2) Enter surveillance voice communications requirement.
- (3) Conduct surveillance debrief.

- (4) Complete surveillance reports.
- (5) Enter DB information for surveillance functions.
- (6) Modify DB information for surveillance functions.
- (7) Acquire an aircraft.
- (8) Classify an aircraft.
- (9) Perform electronic warfare (EW) functions.
- (10) Manually cross-tell tracks.
- (11) Conduct data link operations with a tactical data system.
- (12) Enter DB information for communications information.
- (13) Modify DB information for data communications.
- (14) Configure the radio patch panel (RPP) for operations.
- (15) Configure the signal entry patch panel (SEPP) for operations.

Prerequisite. None.

External Syllabus Support. None.

STD 100	69.0	E	TAOC	L
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Goal. Introduce Traffic Section functions.

Requirement. Given an operational TAOM, perform Traffic Section functions per applicable references to include annex C of the Air Defense Training Section POI Course ID M0972M1.

Performance Standards. Complete each of the following with 80% accuracy:

- (1) Perform Senior Traffic Director (STD) functions.
- (2) Enter Traffic Section communication requirements.
- (3) Construct a TATC log.
- (4) Conduct a Traffic Section brief.
- (5) Conduct a Traffic Section debrief.
- (6) Enter traffic information into the DB.
- (7) Modify traffic information into the DB.
- (8) Complete Traffic Section reports.

Prerequisite. None.

External Syllabus Support. None.

SWD 100	79.5	E	TAOC	L
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Goal. Introduce Weapons Section functions.

Requirement. Given an operational TAOM, perform Weapons Section functions per applicable references to include annex D of the Air Defense Training Section POI Course ID M0972M1.

Performance Standards. Complete each of the following with 80% accuracy:

- (1) Conduct a weapons section brief.
- (2) Enter weapons section communication requirements.
- (3) Complete weapons section report.
- (4) Conduct weapons section debrief.

- (5) Identify sector air defense facility (SADF) functions.
- (6) Enter weapons section information in Hook Data Read-out (HDRO).
- (7) Conduct data link operations with an aircraft.
- (8) Enter the DB for weapons functions.
- (9) Modify the DB for weapons functions.
- (10) Control an air-to-air intercept.

Prerequisite. None.

External Syllabus Support. None.

133. CORE SKILL BASIC TRAINING

- 1. All 200 and 300 level training can run concurrently per the 7210 MOS Progression Model.
- 2. The ADCO must complete either STD or SID within the first year of assignment to a MACS.
- 3. The ADCO must have completed STD and SID after completion of two years of assignment to a MACS.

4. System Training

a. Purpose. To refine ADCO skills required for trouble shooting and maintaining the TAOM system and to provide a means for the ADCO to remain current.

b. General

(1) Administrative Notes. Core Skill Introduction training events must be completed prior to beginning the phase.

(2) Prerequisite. Completion of the Core Skill Introduction phase.

(3) Refresher Training. Refresher training is required once a Core Skill Basic ADCO has been absent from an ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. None.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (4 Events, 9.5 Hours)

SYS-200	2.0	TAOC	L
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Goal. Cable a TAOM system.

Requirement. Properly cable two or more TAOMs and two or more radars. Refer to MCCES POI and TAOM TMs.

Performance Standards. Perform system cabling to include:

- (1) DDB/VCB cabling.
- (2) Multi-radar cabling.
- (3) Fiber channel cabling for Local Area Network.
- (4) Power and ECU pallet cabling.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-201	3.0	TAOC	L
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Goal. Perform TAOM and ECU pallet pack-up.

Requirement. With SL3 tools in garrison or deployed. Refer to MCCES POI and TAOM TMs for assistance.

Performance Standards. Prepare a TAOM for transport by performing the following:

- (1) Remove and pack-up all appropriate equipment in a TAOM and ECU pallet.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-202	3.0	TAOC	L
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Goal. Setup a TAOM for operations.

Requirement. With SL3 tools in garrison or deployed. Refer to MCCES POI and TAOM TM's for assistance.

Performance Standards. Properly setup a TAOM, an ECU pallet, and external communications equipment, as required.

- (1) Unpack and attach roof mount antennas.
- (2) Attach ECU ducting.
- (3) Erect ground antennas.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-203	1.5	TAOC	L
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Goal. Operate a TAOM.

Requirement. In a simulated NBC environment using MOPP gear. Refer to MCCES POI and TAOM TM's for assistance.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct MOPP gear exchange during crew rotation.
- (2) Perform crew requirements while in MOPP level four.
- (3) Successfully complete 80% of the above listed standards.

Prerequisites. NBCD training and MOPP level exchange.

External Syllabus Support. None.

SYS-204	2.0	TAOC	L
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Goal. Perform system turn up/turn down.

Requirement. TAOM(s) in garrison or deployed. Refer to MCCES POI and TAOM TMs.

Performance Standards. Demonstrate proficiency in the following:

- (1) Turn on all TAOM equipment groups in proper order.
- (2) Turn down OCUWS and all equipment groups in proper order.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-205	2.0	TAOC	L
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Goal. Perform organizational level maintenance (OLM) on TAOM's.

Requirement. With SL3 tools in garrison or deployed. Refer to MCCES POI and TAOM TMs.

Performance Standards. Demonstrate proficiency in the following:

- (1) Perform fault isolation via PM & Test.
- (2) Perform preventive maintenance (PM) on all equipment groups.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

5. Senior Traffic Director (STD) Training

a. Purpose. To refine ADCO skills required for the STD designations and to provide a means for a designated STD to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions for STD qualifications.

(b) At least one live and one simulated STD performance event will be conducted during an exercise.

(c) The Core Skill Basic and Core Skill Advanced training can be conducted simultaneously.

(2) Prerequisite. Completion of the Core Skill Basic phase.

(3) Refresher Training. Refresher training is required once a Core Skill Basic ADCO has been absent from an ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for higher-level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrent with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (5 Events, 36.0 Hours)

STD-210	4.0	E	TAOC	L
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Goal. Perform as TATC.

Requirement. In garrison or during an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter and maintain the Traffic Data Base (DB) per STD direction.
- (2) Operate TBMCS to receive and parse an ATO and construct a TATC Log.
- (3) RIO aircraft, to include PUC & WORDS.
- (4) Conduct SIF/Mode IV checks on all applicable aircraft.
- (5) Employ TADIL-J/Link 16 as briefed.
- (6) Initiate and maintain TADIL-C/Link 4A for all capable aircraft until a handover is accomplished, as directed.
- (7) Conduct external/internal handovers of all aircraft, as required.
- (8) Coordinate aerial refueling (AR) operations.
- (9) Place a tanker on the appropriate track and provide flight following, as required.
- (10) Execute a slide/retrograde plan as threat dictates or as directed by the STD.
- (11) Monitor, record and report tanker fuel status.
- (12) Vector aircraft to a tanker and continue to monitor fuel state of enroute aircraft.
- (13) Vector aircraft departing a tanker to a fragged/coordinated control point (CP) and initiate a handover to the aircraft's terminal controller.
- (14) Maintain proper symbol management.
- (15) Maintain appropriate logs.
- (16) Assist the STD as required in traffic management functions.
- (17) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-05, T-08, T-13, T-17, T-55, T-56, T-57, T-63, T-72, T-73, T-74.

External Syllabus Support. External C3 agencies and Fixed/rotary wing aircraft.

STD-211	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for a Traffic Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency in the following standards associated with planning an exercise:

- (1) Recommend airspace control measures (ACM) to be used within the TAOC Area of Operations (AO).
- (2) Determine and develop the procedures for radar, data link and procedural handovers.
- (3) Coordinate with subordinate, adjacent and higher units for implementation of handover procedures and ACM.
- (4) Be familiar with published ACMs found in the Airspace Control Order (ACO), Airspace Control Plan (ACP), and Operations Order (OPORD) so as to determine the impact of site selection on mission accomplishment.
- (5) Conduct a detailed threat analysis.
- (6) Identify the Traffic Section communications requirements and assignments.
- (7) Establish procedures for Marine sector air operations, aerial refueling (AR) operations, and HVAA protection.
- (8) Identify TATC responsibilities.
- (9) Coordinate procedures for receiving and modifying the ATO.
- (10) Identify all traffic DB requirements.
- (11) Prepare the Traffic Section crew brief per TAOC PCL and MCCRES standards.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) STD-210.
- (2) Academics: T-20, T-28, T-29, T-75, T-79.

External Syllabus Support. Required planning documents.

STD-212	8.0	R	TAOC	S/L
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Goal. Perform as STD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Manage a Traffic Section per SAD direction.
- (2) Supervise all traffic DB entries.
- (3) Ensure effective employment and adherence to published ACMs and RIO procedures.
- (4) Establish TADIL-C/Link 4A as briefed.
- (5) Employ TADIL-J/Link 16 as briefed.

- (6) Manage control of AR operations.
- (7) Assist in coordinating SAR/TRAP missions in assigned sector.
- (8) Ensure adherence to established Traffic Section emergency procedures.
- (9) Conduct handovers with a Weapons Section and external agencies.
- (10) Perform appropriate VFS/OS functions associated with traffic.
- (11) Assist a Surveillance Section in identification of friendly aircraft in the assigned sector.
- (12) Compile and forward applicable reports.
- (13) Successfully complete 80% of the above listed standards.

Prerequisite. STD-211.

External Syllabus Support. None.

STD-213	8.0	T R E	TAOC	L
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Goal. Perform as STD.

Requirement. During a live exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in STD-212.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. STD-212.

External Syllabus Support. External C3 agencies, tactical/support aircraft.

STD-214	8.0	E	TAOC	L
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Goal. Designate as STD.

Requirement. During a live exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in STD-213.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. STD-213.

External Syllabus Support. External C3 agencies, tactical/support aircraft.

6. Surveillance Identification Director (SID) Training

a. Purpose. To refine ADCO skills required for SID qualification and to provide a means for a designated SID to remain current.

b. General(1) Administrative Notes

(a) Perform all functions for SID qualifications.

(b) At least one live and one simulated SID performance event will be conducted during an exercise.

(c) Core Skill Basic and Core Skill Advanced training can be conducted concurrently.

(2) Prerequisite. Completion of the Core Skill Introduction phase.

(3) Refresher Training. Refresher training is required once a Core Skill Basic ADCO has been absent from an ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for higher level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrent with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (14 Events, 104.0 Hours)

SID-220	4.0	E	TAOC	S/L
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Goal. Perform as a surveillance operator.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter appropriate surveillance DB entries to include:
 - (a) Local/Remote radars.
 - (b) Special points or corridors.
 - (c) IFF/SIF codes.
 - (d) Auto ID parameters.
 - (e) Applicable map/overlay features.
- (2) Execute briefed ID and classification procedures to include:
 - (a) Correlate SIF codes with published directives.
 - (b) Interrogate Mode IV and post results as required.
 - (c) Adhere to the published ID criteria/ROE when evaluating unknown tracks.
 - (d) Timely classify tracks per SID direction.
- (3) Ensure symbol management, focus on data entry/updating.
- (4) Conduct manual crosstell, as directed.
- (5) Compile and forward any applicable reports.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-25, T-33, T-46, T-47, T-48, T-63, T-64.

External Syllabus Support. External C3 agencies.

SID-221	8.0	E	TAOC	L/S
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Goal. Perform as DLC.

Requirement. In a garrison/field environment, using TAOC equipment, operate a serial link (LINK-11B, ATDL-1, GBDL).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and troubleshoot each link as applicable.
- (3) Perform all order functions associated with the appropriate link.
- (4) Perform link management functions.
- (5) Enter appropriate data filters as listed in OPTASK LINK.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-4, T-7, T-10, T-15, T-23, T-27, T-30, T-31, T-39, T-54, T-60.

External Syllabus Support. External C3 agencies.

SID-222	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, operate a live netted Data Link (LINK-11A).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and trouble shoot each link as applicable.
- (3) Perform a POFA test.
- (4) Operate in the following modes:
 - (a) Radio Silent (RADSIL).
 - (b) Net Control Station (NCS).
 - (c) Picket.
- (5) Perform link management functions per SID direction.
- (6) Coordinate data link responsibilities over designated voice nets.
- (7) Enter appropriate data filters as listed in OPTASKLINK.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-53.

External Syllabus Support. JTAO Data Link platform(s).

SID-223	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, operate in a nodeless link environment (Link-16).

Performance Standards. Demonstrate proficiency in the following:

- (1) Achieve fine synchronization in JTIDS/Link 16 Network, determine status of, and troubleshoot a link as appropriate.
- (2) Operate in Radio Silent and Data Silent modes of operation.
- (3) Identify Stacked Net # assignments per the OPTASKLINK for voice and air control; ensure they are entered and validated in the DB.
- (4) Establish TAOC as Network Time Reference (NTR).
- (5) Extract information from slot block allocation sheet in the NDL for entry into the DB.
- (6) Enter data filters per the OPTASK LINK.
- (7) Load appropriate time and NDL into a JTIDS terminal from a TAOM and troubleshoot.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-56.

External Syllabus Support. Link-16 capable external C3 agencies.

SID-224	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, utilize National Systems Data (NSD).

Performance Standards. Demonstrate proficiency in the following:

- (1) Coordinate use of the Intelligence Broadcast Receiver (IBR) during TAMC operations.
- (2) Coordinate use of an IBR and employ NSD with a focus on surface to air threats relevant to the tactical environment.
- (3) Coordinate use of an IBR and employ NSD during down pilot/Trap/CSAR scenarios.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-34.

External Syllabus Support. External C3 agencies and Intelligence Broadcast Services.

SID-225	8.0		TAOC	L/S
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Goal. Prepare/setup the ADCP as a stand alone system.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Erect ground antenna.
- (2) Ensure workstation and server drives are properly installed.
- (3) Load KGV-8 with crypto fill device.

- (4) Load Network Data Load (NDL).
- (5) Download emplacement data.
- (6) Activate Link.
- (7) Monitor link activity utilizing MITS laptop, and troubleshoot the link.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-4.

External Syllabus Support. ADCP and JRE.

SID-226	8.0		TAOC	L/S
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Goal. Prepare/setup ADCP within TAOM configuration.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure Multi-Channel Interface Unit (MCIU) hard drive is properly installed.
- (2) Load KGV-8 with crypto fill device.
- (3) Activate Link.
- (4) Monitor link activity utilizing MITS laptop and troubleshoot the link.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-4.

External Syllabus Support. ADCP and JRE.

SID-227	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Surveillance Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise.

- (1) Identify potential gaps in coverage due to terrain masking and radar horizon limitations, and recommend emplacement/employment of TAOC radars.
- (2) Coordinate with subordinate, adjacent and higher units for data link architecture and implement per OPTASKLINK.
- (3) Extract the ID matrix per published ROE, OPORD, ACP or ACO.
- (4) Conduct a detailed threat analysis.
- (5) Identify the Surveillance Section communications requirements and assignments.
- (6) Recommend EMCON/RADCON to the TAOC and subordinate agencies' based on OPORD, ACP and ACO direction.
- (7) Identify Surveillance Operator (SO) and DLC responsibilities.
- (8) Plan for employment of a remote radar.
- (9) Identify surveillance DB requirements.
- (10) Prepare the Surveillance Section crew brief per TAOC PCL and MCCRES standards.

(11) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SID-220 through SID-226.
- (2) Academics: T-16, T-18, T-32, T-65.

External Syllabus Support. Required planning documents.

SID-228	8.0		TAOC	L
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Goal. Maximize radar performance.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Recommend radar site selection.
- (2) Perform radar alignment.
- (3) Perform radar registration.
- (4) Coordinate to optimize performance of selected radars.
- (5) Recommend a degradation plan.
- (6) Develop a radar coverage diagram for system radars.
- (7) Conduct remote radar operations.
- (8) Plan for AN/TPS-59 decoy employment.
- (9) Know the capabilities and limitations of all TAOC radars.
- (10) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-37, T-40, T-43.

External Syllabus Support. None.

SID-229	12.0	E	TAOC	S/L
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Goal. Plan for emplacement and employment of a TMD site.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Evaluate the threat.
- (2) Conduct a site survey.
- (3) Emplace a TMD site.
- (4) Provide reporting connectivity.
- (5) Troubleshoot the following:
 - (a) ADCP.
 - (b) PPDL.
 - (c) Radios.
 - (d) Data Links.
- (4) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-4, T-15, T-34, T-67, T-70.

External Syllabus Support. None.

SID-230	4.0	TAOC	L/S
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Goal. Perform EW operations.

Requirement. In a garrison/field environment using TAOC equipment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter a TAOC EMCON plan and missile thresholds in the DB.
- (2) Detect, identify and report all jamming to the SAD.
- (3) Fix location of threat jammers with proper symbology (strobes/air tracks).
- (4) React to an EMCON alert and implement the TAOC EMCON plan per SAD direction.
- (5) Coordinate with a radar tech to optimize radar performance in an EW environment.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. Applicable platforms.

SID-231	8.0	R	TAOC	S/L
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Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a detailed crew brief developed per pertinent air operations information received via a TAOC operations brief/MACCS Commander's brief. The brief will be conducted per the TAOC PCL and MCCRES standards.
- (2) Supervise surveillance DB entries including EMCON, data links, radar performance, MRRs and ID corridors.
- (3) Supervise air surveillance of the assigned sector.
- (4) Supervise implementation of established ID criteria and subsequent classification process.
- (5) Supervise initialization and management of data links.
- (6) Perform detailed casualty procedure planning in order to assume functions of the Track Data Coordinator (TDC) or Interface Coordination Officer (ICO) when operating as an alternate TACC.
- (7) Manage an EP/EMCON plan for the TAOC and subordinate agencies.
- (8) Perform appropriate VFS/OS functions associated with surveillance.
- (9) Implement the published manual crosstell procedures.
- (10) Manage the Surveillance Section per SAD direction.
- (11) Compile and forward applicable reports.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites. SID-227 and SID-228.

External Syllabus Support. External C3 agencies.

SID-232	8.0	E	TAOC	L
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Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-241.
- (2) Conduct surveillance planning and operations with a non-MACCS JTAO platform.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SID-231.

External Syllabus Support. External C3 agencies.

SID-233	4.0	E	TAOC	L
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Goal. Designate as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-241.
- (2) Conduct surveillance planning and operations with a non-MACCS JTAO platform.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SID-232.

External Syllabus Support. External C3 agencies.

134. CORE SKILL ADVANCED TRAINING

1. Ground Based Air Defense (GBAD) Training.

a. Purpose. To refine ADCO skills required to be qualified as a Missile Controller (MC) and to provide a means for the ADCO to remain current.

b. General

(1) Administrative Notes

(a) Successful completion of the MC and AIC events are required for designation as a Weapons Controller.

(b) Core Skill Basic and Core Skill Advanced training can be conducted concurrently. However, ADCO focus must remain on the completion of the Core Skill Basic phase.

(c) For evaluation purposes, a mission will consist of a brief execution and debrief of each event.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ADCO has been absent from a ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 300-level syllabus.

c. Crew Requirements. A core competent TAOC crew.

d. Academic Training. Academic training will be conducted prior to and concurrent with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (4 Events, 22.0 Hours)

GBAD-300	2.0		TAOC	L/S
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Goal. Perform MC functions.

Requirement. Without data link, in a field/garrison environment, coordinate C2 with a GBAD CP.

Performance Standards. Perform the following functions:

- (1) Conduct manual crosstell to simulated/live FU.
- (2) Conduct manual assignments against an air threat.
- (3) Disseminate appropriate Weapons Control Status (WCS), Air Defense Warning Condition (ADWC), and States of Alert (SOA).
- (4) Post FU status.
- (5) Knowledge the TAOC TMD capabilities and limitations and interface with joint services.
- (6) Ensure related DB entries are entered and correct.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-7, T-22, T-24, T-32, T-33, T-41, T-67, T-68, T-78, T-80, T-81, T-82, T-84, T-85, T-86.

External Syllabus Support. SAM FU if live.

GBAD-301	4.0	R	TAOC	L/S
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Goal. Perform MC functions.

Requirement. During an exercise, with data link established, utilize GBAD units in a medium/high intensity air defense environment.

Performance Standards. Perform in the following areas:

- (1) Brief the MC portion of a TAOC crew brief per the TAOC pocket checklist.
- (2) Ensure related DB entries are entered and correct.

- (3) Maintain an accurate/critical information flow to the FU via the net(s).
- (4) Complete assignments against an air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC and SOA to the FU.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) GBAD-300.
- (2) Academics: T-23, T-31, T-71.

External Syllabus Support. SAM units, if live.

GBAD-302	8.0	E	TAOC	L/S
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Goal. Perform MC functions.

Requirement. During an exercise, employ an Integrated Air Defense System (IADS), utilize multiple SAM units in a centralized mode of control (with data links established), and in a medium/high intensity air defense environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the MC portion of a TAOC crew brief per the TAOC pocket checklist.
- (2) Ensure all related DB entries are entered and correct.
- (3) Maintain information flow to the FU via the appropriate net.
- (4) Conduct simultaneous assignments between two FUs against a credible air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC and SOA to the FUs.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. GBAD-301.

External Syllabus Support. SAM FU(s) and CAP/aggressor aircraft.

GBAD-303	8.0	E	TAOC	L/S
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Goal. Qualify as MC.

Requirement. During an exercise, while employing an Integrated Air Defense System (IADS), utilizing multiple SAM units in a centralized mode of control (with data links established) and in a medium/high intensity air defense environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the MC portion of a TAOC crew brief per the TAOC pocket checklist.
- (2) Ensure all related DB entries are entered and correct.

- (3) Maintain information flow to the FU via the appropriate net.
- (4) Conduct simultaneous assignments between two FUs against a credible air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC and SOA to the FUs.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. GBAD-302.

External Syllabus Support. SAM FU(s), CAP and aggressor aircraft.

2. Air Intercept Controller (AIC) Training.

a. Purpose. To refine ADCO skills required to be qualified as an AIC and to provide a means for the ADCO to remain current.

b. General

(1) Administrative Notes

(a) Successful completion of the AIC and MC events are required for designation as a Weapons Controller.

(b) Core Skill Basic and Core Skill Advanced training can be conducted concurrently. However, ADCO focus must remain on the completion of the Core Skill Basic phase.

(c) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(d) The AIC will become proficient in controlling simulated and live fighter aircraft employing section and division tactics.

(e) The AIC will become proficient in controlling during live and simulated integrated air defense exercises with multiple fighters.

(f) Briefing and debriefing standards will be per the squadron SOP (developed using TOPGUN and F/A-18 TACMAN standards) to include flight safety and emergency procedures prior to executing any event.

(g) Two-way Link 4A and/or Link 16 will be used to the fullest extent possible for each event controlled.

(h) Missions will be executed per ROE established by published AAW directives, operational planning orders/documents, or individual mission briefs.

(i) TACTS facilities should be used when available for debriefing purposes.

(j) All AIC events should be performed in the OM during initial qualification.

(k) Run and hour credit will be given for control from non OM facilities.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ADCO has been absent from a ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrent with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (11 Events, 39.0 Hours)

AIC-310	0.5	R	TAOC	S
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Goal. Take appropriate action for an aircraft emergency.

Requirement. During a simulated emergency (controlled & uncontrolled). Refer to TAOC PCL and Squadron SOP for emergencies for assistance.

Performance Standards. Successfully complete squadron SOP checklist for aircraft emergency using proper switch actions and AWC utilization.

- (1) Determine nature of emergency.
- (2) Establish "knock it off" as appropriate.
- (3) Notify proper agencies.
- (4) Direct On-Scene Commander squawk emergency as appropriate.
- (5) Using proper switch actions, establish emergency fix as appropriate.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-17.

External Syllabus Support. None.

AIC-311	1.5	R	TAOC	S
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Goal. Control a simulated section of fighter aircraft.

Requirement. Control against a multiple threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Identify the below threat formations and tactics:
 - (a) Formations:
 - VIC.
 - Champagne.
 - Ladder.
 - Wall.
 - Box.
 - Stack.
 - Echelon.
 - (b) Tactics per AFTTP 3-1.
- (2) Utilize an AWC.
- (3) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-3, T-9, T-12, T-13, T-19, T-26, T-41, T-68, T-70, T-71, T-76, T-78, T-80, T-81, T-82, T-83, T-85, T-86.

External Syllabus Support. None.

AIC-312	1.5	R	TAOC	S
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Goal. Control a simulated section of fighter aircraft.

Requirement. Against an unknown threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Provide threat information using core information/communications format as briefed.
- (2) Provide broadcast control transitioning to tactical control after "the commit" or as briefed.
- (3) Utilize briefed GCI procedures until training goals are met.
- (4) Initiate and employ Link-4A or Link-16 as briefed.
- (5) Utilize an AWC.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) AIC-311.
- (2) Academics: T-55, T-56, T-84.

External Syllabus Support. None.

AIC-313	1.5	R	TAOC	S
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Goal. Control a simulated division of fighter aircraft.

Requirement. Against an unknown threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Provide threat information using core information/communications format as briefed.

- (2) Provide broadcast control transitioning to tactical control after "the commit."
- (3) Utilize briefed GCI procedures until training goals are met or as briefed.
- (4) Initiate and employ Link-4A or Link-16 as briefed.
- (5) Utilize an AWC.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-312.

External Syllabus Support. None.

AIC-314	4.0	E	TAOC	S
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Goal. Perform as AIC.

Requirement. During a SIMEX.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC DB entries are correct.
- (2) Initiate and employ Link 4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate the current threat status as appropriate (WCS, ADWC, and SOA) to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-313.

External Syllabus Support. None.

AIC-315	2.0		TAOC	L
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Goal. Perform AIC functions from a TAOC radarscope.

Condition. During a live event, control a section/division from a TPS-59 or TPS-63 radar console.

Performance Standards. Demonstrate proficiency in the following:

- (1) Proper UHF and ICS communications setup.
- (2) Proper radar console setup.
- (3) Utilize briefed GCI procedures.
- (4) Utilize external communications.
- (5) Successfully complete 80% of the above listed requirements.

Prerequisite. AIC-313

External Syllabus Support. Fighter and aggressor aircraft.

Goal. Control a section/division of fighter aircraft.

Performance Standards. Demonstrate proficiency in the following, on three separate missions with a minimum of one division mission:

- (1) Utilize GCI procedures as briefed or as the tactical situation dictates.
- (2) Utilize an AWC.
- (3) Successfully complete 80% of the above listed standards.

External Syllabus Support. Fighter and aggressor aircraft.

Goal. Control a section/division of fighter aircraft.

Performance Standards. Demonstrate proficiency in the following, on three separate missions with a minimum of one division mission:

- (1) Utilize GCI procedures as briefed or as the tactical situation dictates.
- (2) Utilize an AWC.
- (3) Successfully complete 80% of the above listed standards.

External Syllabus Support. Fighter and aggressor aircraft.

Goal. Control a section/division of fighter aircraft.

Performance Standards. Demonstrate proficiency in the following, on three separate missions with a minimum of one division mission:

- (1) Provide tactical control when requested or when the threat dictates.
- (2) Provide threat information using core information/comm format as briefed.
- (3) Utilize an AWC.

(4) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-313.

External Syllabus Support. Fighter and aggressor aircraft.

AIC-319	4.0	E	TAOC	L
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Goal. Perform as AIC.

Requirement. During a mission, or in an exercise, control at least a division under the supervision of an AICI.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC related DB entries are entered and correct.
- (2) Initiate and employ Link-4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures to control CAP aircraft using broadcast/tactical control methods.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate current threat status and appropriate WCS, ADWC and SOA to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch actions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites. AIC-315, AIC-316, AIC-317, AIC-318.

External Syllabus Support. Fighter and aggressor aircraft.

AIC-320	4.0	E	TAOC	L
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Goal. Qualify as AIC.

Requirement. During a mission, or in an exercise, control at least a division under the supervision of an AICI.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC related DB entries are entered and correct.
- (2) Initiate and employ Link-4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures to control CAP aircraft using broadcast/tactical control methods.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate current threat status and appropriate WCS, ADWC and SOA to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch actions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-319.

External Syllabus Support. Fighter and aggressor aircraft.

135. CORE PLUS TRAINING1. Senior Weapons Director (SWD) Training

a. Purpose. To refine ADCO skills required for qualification and designation as a SWD. Additionally, these events will provide a means for the designated SWD to remain current.

b. General(1) Administrative Notes

(a) Core Plus training will consist of planning for and execution of Anti-Air Warfare (AAW) exercise. This phase of training encompasses SWD specific training events.

(b) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(2) Prerequisite. Core Skill Basic and Core Skill Advanced phases.

(3) Refresher Training. Refresher training is required once a Core Plus ADCO has been absent from an ADCO billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 400 level syllabus.

c. Crew Requirements. Core competent TAOC crew.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (4 Events, 40.0 Hours)

SWD-400	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for a Weapons Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise:

- (1) Recommend ACM to be used within the TAOC AOR.
- (2) Develop a destruction area within the TAOC assigned air defense sector by ensuring the following:
 - (a) Coordination with GBAD assets for employment/emplacement and MEZ construction.
 - (b) Coordination with higher headquarters for CAP employment and FEZ considerations.
- (3) Determine CAP management/control responsibilities and procedures.
- (4) Coordinate with an STD for development of handover procedures and symbol management functions.

- (5) Coordinate with an SADF staff for reporting AAW asset status, strip alert procedures and CAP reconstitution.
- (6) Establish procedures for target assignments.
- (7) Develop alternate/casualty engagement zones based on the threat and friendly AAW systems availability.
- (8) Disseminate TAOC and subordinate agency specific ROE procedures/requirements per published ROE.
- (9) Develop detailed procedures for IADS employment in decentralized and autonomous modes of control.
- (10) Develop procedures for semi-automatic and automatic modes of operation within a TAOM.
- (11) Know the TAOC TMD capabilities and interface with joint services.
- (12) Conduct a detailed threat analysis.
- (13) Prepare a Weapons Section brief per the TAOC PCL.
- (14) Identify Weapons Section communications requirements and assignments.
- (15) Identify weapons DB items.
- (16) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-01, T-02, T-06, T-11, T-14, T-20, T-22, T-23, T-24, T-28, T-32, T-34, T-35, T-36, T-41, T-49, T-67, T-68, T-69, T-70, T-71, T-76, T-77, T-78, T-79, T-80, T-81, T-82, T-84, T-86.

External Syllabus Support. None.

SWD-401	4.0	R	TAOC	S
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Goal. Perform as SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Manage employment of assigned weapons systems per established ROE.
- (2) Conduct a detailed crew brief developed from air operations information and received via the TAOC operations brief/MACCS commander's brief. The brief will be conducted per TAOC PCL and MCCRES Standards.
- (3) Supervise weapons related DB entries to include WEZs, weapons control boundaries, TAORs and special points.
- (4) Manage the Weapons Section per SAD direction.
- (5) Exercise system capabilities to assist in the ID process and the conduct of overall threat evaluation.
- (6) Maintain status of assigned weapons systems and ensure critical information is relayed to appropriate agencies.
- (7) Maintain SA on WEZ engagements, WCS, ADWC and SOA and make recommended changes.
- (8) Request Strip Launch Alert (SLA) aircraft in a timely manner, as threat dictates.
- (9) Ensure maximum use of data links to minimize voice communications.
- (10) Ensure emergency procedures are fully understood and effectively implemented, as required.
- (11) Compile and forward applicable reports.

(12) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-400.

External Syllabus Support. None.

SWD-402	16.0	E	TAOC	L
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Goal. Perform as SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SWD-401.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-401.

External Syllabus Support. External C3 agencies and tactical/support aircraft.

SWD-403	12.0	E	TAOC	L
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Goal. Designate as SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SWD-401.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-402.

External Syllabus Support. External C3 agencies and tactical/support aircraft.

2. Senior Air Director (SAD) Training

a. Purpose. To refine ADCO skills required for designation as a SAD and to provide a means for the designated SAD to remain current.

b. General

(1) Administrative Notes

(a) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(2) Prerequisite. Completion of the Core Skill Advanced phase and SWD designation.

(3) Refresher Training. Refresher training is required once a Core Plus ADCO has been absent from an ADCO billet for 16 months or longer. Upon

return to an appropriate billet, the ADCO will complete "R" coded events in the 400 level syllabus.

c. Crew Requirements. Core competent TAOC crew.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (8 Events, 96.0 Hours)

SAD-410	8.0		TAOC	L
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Goal. Perform system troubleshooting.

Requirement. With a faulted TAOM system.

Performance Standards. Demonstrate proficiency in the following:

- (1) Fault isolate components of the seven major equipment groups of a TAOM to the LRI.
- (2) Reconfigure the system around failed units.
- (3) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SWD-403.
- (2) Academics: T-10, T-14, T-38, T-39, T-42, T-50, T-51, T-61.

External Syllabus Support. None.

SAD-411	24.0	R	TAOC	L
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Goal. Perform as SAD.

Requirement. During garrison flight operations.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a crew brief prior to flight/link operations.
- (2) Ensure proper system configuration and DB inputs.
- (3) Direct and manage crew function.
- (4) Properly maintain records and logs.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-410

External Syllabus Support. Fighter/aggressor aircraft and/or data link platforms.

SAD-412	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Command Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency in the following:

- (1) Prepare a SAD brief per the TAOC PCL.
- (2) Oversee planning in the Traffic, Weapons, and Surveillance Sections.
- (3) Develop system configuration plan.
- (4) Plan the emplacement of a TAOC to include radar and EW/C employment.
- (5) Supervise DB construction and entry.
- (6) Coordinate with a SADC in planning overall TAOC employment.
- (7) Supervise the conduct of a detailed threat analysis.
- (8) Develop a crew watch schedule and change over procedures.
- (9) Develop a casualty/degradation plan and detailed restoration priorities plan.
- (10) Ensure communications and power requirements that will allow for mission accomplishment are identified.
- (11) Identify system limitations information for the ACE commander.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SAD-411.
- (2) Academics: T-1, T-2, T-4, T-6, T-11, T-16, T-32, T-35, T-36, T-37, T-40, T-41, T-52, T-58, T-59, T-62, T-66, T-87.

External Syllabus Support. None.

SAD-413	16.0	R	TAOC	S
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Goal. Perform as SAD.

Requirement. With a TAOC only exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a detailed SAD brief per the TAOC PCL.
- (2) Supervise system configuration and DB input.
- (3) Supervise and manage the traffic, weapons and surveillance sections.
- (4) Identify systems failures/degradations, trouble shoot and perform fault isolation and take corrective action utilizing the SCC.
- (5) Execute briefed casualty procedures and implement the restoration plan to include system reconfiguration, as required.
- (6) Properly maintain records and logs.
- (7) Ensure the SCC is conducting appropriate system maintenance/management and required interface with maintenance personnel.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-412

External Syllabus Support. None.

SAD-414	8.0		TAOC	S
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Goal. Perform as SAD.

Requirement. During an integrated exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed in SAD-413.
- (2) Coordinate integration of senior, adjacent, and subordinate agencies. Ensure accurate and timely critical information flow is being conducted.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-413.

External Syllabus Support. External C3 agencies.

SAD-415	8.0	E	TAOC	L
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Goal. Perform site emplacement of a TAOC.

Requirement. In garrison/field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Tactical dispersion of TAOMs.
- (2) Effective use of passive defense measures.
- (3) Ensure proper cabling of a TAOC.
- (4) Echelon in/out of TAOMs and external units, as required.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-412.

External Syllabus Support. MHE.

SAD-416	16.0	E	TAOC	L
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Goal. Perform as SAD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SAD-410 through SAD-415.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-414.

External Syllabus Support. External C3 agencies and MHE.

SAD-417	8.0	E	TAOC	L
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Goal. Designate as SAD.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SAD-410 through SAD-415.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-416.

External Syllabus Support. External C3 agencies.

3. Sector Air Defense Commander (SADC) Operations Officer Training

a. Purpose. To refine ADCO skills required for designation as a SADC operations officer and to provide a means for the designated SADC operations to remain current.

b. General

(1) Administrative Notes

(a) An ADCO will be considered for designation upon completion of all events contained with the three phases of training (academic, performance and evaluation).

(b) A review of the MPR will be conducted by the squadron's operations officer and a recommendation will be staffed to the commanding officer.

(c) The ADCO shall have a designation letter, with any waivers deferments or endorsements, filed in the MACCS Performance Record.

(d) For evaluation purposes, an event will consist of a brief, execution and debrief.

(2) Prerequisite. SWD-403.

(3) Refresher Training. Refresher training is required once a qualified SADC operations officer has been absent from an SADC operations officer billet for 16 months or longer. Upon return to an appropriate billet, the ADCO will complete "R" coded events in the 400 level syllabus.

(4) Transition Training. This phase facilitates the training of the ADCO and the transition of officers other than ADCO into the position of SADF operations officer.

c. Crew Requirements. Core competent TAOC and SADF crew.

d. Academic Training. The MAWTS-1 ASP is designed to support live/simulated training events and will be accomplished as a prerequisite for designation as a SADF operations.

e. Live and Simulator Event Training (3 Events, 40.0 Hours)

SOPS-420	8.0	R	TAOC	L/S
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Goal. Conduct planning as an SADC Operations Officer

Requirements. With appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise.

- (1) Prepare a TAOC operations brief per pertinent operations information received via OPORDs, air defense plans, ACP's, ACO's and other applicable directives in order to allow TAOC crews to brief and execute the plan.
- (2) Develop an exercise specific SADF crew (crew chief, SADC operator, GBAD and FW and Intel reps) and delineate their responsibilities per squadron SOPs.
- (3) Develop SADF requirements/layout per SADC direction.
- (4) Identify and plan SADF communications requirements.
- (5) Conduct detailed threat analysis and plan for integration of fighter aircraft and GBAD assets in the destruction area
- (6) Conduct a detailed time-distance analysis to determine CAP manning/strip alert requirements for fighter aircraft allocated to the destruction area.
- (7) Conduct detailed tanker planning to correspond to the fighter plan.
- (8) Coordinate with subordinate, adjacent and higher units for connectivity/critical information flow requirements, direction and dissemination of individual unit/agency responsibility.
- (9) Conduct detailed planning for the integration of MACCS AAW/C3 agencies within the TAGS.
- (10) Develop a plan in preparation for assuming the ATACC role.
- (11) Successfully complete 80% of the above listed requirements.

Prerequisite. SWD-417.

External Syllabus Support. None.

SOPS-421	16.0	E	TAOC	S/L
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Goal. Execute duties as an SADC operations officer.

Requirement. During an integrated MACCS exercise in a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a SADC brief develop per pertinent air operations information received via OPORDs, air defense plans, ACP's, ACO's and other applicable directives.
- (2) Interface between the TAOC crew and required external agencies to ensure effective/timely flow of critical air defense/airspace management information.
- (3) Effectively manage a SADF crew per SADC direction.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. SOPS-420.

External Syllabus Support. External C3 Agencies.

SOPS-422	16.0	E	TAOC	L
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Goal. Designate as an SADC Operations Officer.

Requirement. During an exercise in a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed for SOPS-421.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SOPS-421.

External Syllabus Support. External C3 Agencies and fighter aircraft.

4. Sector Air Defense Commander (SADC) Training

a. Purpose. To refine the skills required for designation as a SADC and to provide a means for the designated SADC to remain current.

b. General

(1) Administrative Notes

(a) An SADC will be considered for designation upon completion of all events contained with the three phases of training (academic, performance and evaluation).

(b) A review of the MPR will be conducted by the squadron's WTPP and commanding officer and a recommendation will be staffed to the MACG commanding officer.

(c) The SADC shall have a designation letter, with any waivers deferments or endorsements, filed in the MACCS Performance Record.

(d) For evaluation purposes, an event will consist of a brief, execution and debrief.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a qualified SADC has been absent from an SADC billet for 16 months or longer. Upon return to an appropriate billet, the SADC will complete "R" coded events in the 400 level syllabus.

(4) Transition Training. This phase facilitates the training of the ADCO and the transition of officers other than ADCO into the position of SADC.

c. Crew Requirements. Core competent TAOC and SADF crew.

d. Academic Training. The MAWTS-1 ASP is designed to support live/simulated training events and will be accomplished as a prerequisite for designation as a SADC.

e. Live and Simulator Event Training (3 Events, 40.0 Hours)

SADC-430	8.0	R	TAOC	L
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Goal. Conduct tactical planning as an SADC.

Requirements. With appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise.

- (1) Provide guidance and direction for sector air defense planning per pertinent air operations information received via OP Orders, air defense plans, ACP's, ACO's and other applicable directives.
- (2) Approve SADF requirements/layout as developed by the SADC operations officer.
- (3) Approve SADF communications plan.
- (4) Provide planning guidance for integration of fighter aircraft and GBAD assets in the destruction area.
- (5) Provide planning guidance for determination of CAP manning/strip alert requirements for fighter aircraft allocated to the destruction area.
- (6) Provide tanker planning guidance.
- (7) Coordinate with subordinate, adjacent and higher units for connectivity/critical information flow requirements, direction and dissemination of individual unit/agency responsibility.
- (8) Ensure integration of MACCS AAW/C3 agencies within the TAGS.
- (9) Approve the plan for assuming the ATACC role.
- (10) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-1, T-2, T-5, T-6, T-8, T-11, T-12, T-13, T-14, T-16, T-17, T-18, T-19, T-20, T-22, T-24, T-25, T-27, T-28, T-29, T-30, T-32, T-34, T-35, T-36, T-37, T-41, T-48, T-49, T-52, T-57, T-58, T-59, T-60, T-62, T-63, T-64, T-65, T-66, T-67, T-71, T-74, T-75, T-79, T-80, T-86.

External Syllabus Support. None.

SADC-431	16.0	E	TAOC	S
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Goal. Execute duties as an SADC.

Requirement. During an exercise in a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Provide guidance and direction for sector air defense operations per pertinent air operations information received via OP Orders, air defense plans, ACPs, ACOs and other applicable directives.
- (2) Interface with a TACC SWO and other external agencies to ensure effective/timely flow of critical air defense/airspace management information.
- (3) Effectively manage a SADF staff.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. SADC-430.

External Syllabus Support. External C3 Agencies.

SADC-432	16.0	E	TAOC	L
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Goal. Designate as SADC.

Requirement. During an exercise in a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed in SADC-431.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SADC-431.

External Syllabus Support. External C3 Agencies and fighter aircraft.

140. INSTRUCTOR (INST) TRAINING

1. Instructor Designation Training

a. Purpose. To designate the ADCO as an INST and AICS.

b. General

(1) Administrative Notes

(a) An ADCO will be considered for designation upon completion of all events contained with the three phases of training (academic, performance, and evaluation).

(b) A review of the MPR will be conducted by the WTI and a recommendation will be staffed to the commanding officer.

(c) The ADCO shall have a designation letter, with any waivers, deferments or endorsements, filed in the MACCS Performance Record.

(2) Prerequisite. The instructor will be current in the course of instruction for the given position.

c. Crew Requirements. None.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (2 Events, 10 Hours)

INST-500	6.0	E	TAOC	L
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Goal. Conduct a period of instruction.

Requirement. An operational system, classroom facilities and instructor/evaluator.

Performance Standard. Demonstrate the ability to instruct a TAOC "T" code event

Prerequisite. None.

External Syllabus Support. None.

INST-501	4.0	E	TAOC	L/S
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Goal. Instruct, monitor, evaluate and debrief a student.

Requirement. An operational TAOC system with radars, aircraft and classroom facilities.

Performance Standards. Demonstrate the ability to:

- (1) Review a student's training history.
- (2) Develop and document a training plan.
- (3) Conduct a monthly student training review.
- (4) Ensure continuous, objective assessment of the student's progress during training.
- (5) Provide recommendations on a student's readiness for qualification.
- (6) Identify areas requiring improved performance.
- (7) Provide information during the training review process, as required.
- (8) Make decisions on skill enhancement training after receiving input from other instructors and the student.
- (9) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) INST-500.
- (2) Instructor will be current in course of instruction for given position.

External Syllabus Support. None.

2. Air Intercept Controller Supervisor (AICS) Training

a. Purpose. To designate the ADCO as an AICS.

b. General

(1) Administrative Notes

(a) During AICS training, a qualified/designated AIC will act as the "student" AIC for the AICS under instruction.

(b) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(c) AICS evaluation and certification will be done by an AICI.

(2) Prerequisite. AIC-320.

c. Crew Requirements. SAD, SCC, AICI and AIC.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (3 Events, 28 Hours)

AICS-510	6.0	E	TAOC	S/L
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Goal. Develop instruction techniques.

Requirement. A simulation capable system and classroom facilities.

Performance Standards. Under instruction of an AICI, demonstrate ability to:

- (1) Conduct a comprehensive brief with an AIC to include:
 - (a) T&R requirements.
 - (b) Mission/targeting game plan and timeline awareness.
 - (c) Previously identified weak areas.
- (2) Conduct a comprehensive debrief to include:
 - (a) Conduct a mission with emphasis on communications priority.
 - (b) Lessons learned.
 - (c) Establishing AIC goals and training requirements.
- (3) Instruct the AIC on the five phases of an intercept.
- (4) Instruct the AIC on air control communication.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-320

External Syllabus Support. MAWTS-1 ASP and Tactics Trainer.

AICS-511	6.0	E	TAOC	L
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Goal. Instruct section and division tactics.

Requirement. An operational TAOC system with radars and aircraft.

Performance Standards. Under the instruction of an AICI, demonstrate proficiency as an INST:

- (1) Instruct the following intercept tactics:
 - (a) Section tactics.
 - (b) Division tactics.
- (2) Instruct intercept control.
- (3) Instruct students on the five phases of an intercept.
- (4) Instruct air control communication.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. AICS-510.

External Syllabus Support. MAWTS-1 ASP and Tactics Trainer.

AICS-512	16.0	E	TAOC	L
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Goal. Instruct, monitor and debrief an AIC.

Requirement. An operational TAOC system with radars, aircraft, and classroom facilities.

Performance Standards. Under the instruction of an AICI, demonstrate proficiency as an INST:

- (1) Conduct a comprehensive flight brief with AIC prior to controlling the mission.
- (2) Monitor the AIC during a mission. Focus on evaluating performance for debriefing purposes and ensuring safety of flight considerations are adhered to by the AIC.
- (3) Conduct a comprehensive debrief focusing on air control communications and tactical lessons learned.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. AICI-512.

External Syllabus Support. Fighter and aggressor aircraft; MAWTS-1 ASP and Tactics Trainer.

150. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS TRACKING CODES

1. General

a. An ADCO will be considered for designation upon completion of all events contained with the three phases of training (academic, performance, and evaluation).

b. A review of the MPR will be conducted by the squadron's WTI and a recommendation will be staffed to the commanding officer.

c. The ADCO shall have a designation letter, with any waivers deferments or endorsements, filed in the MACCS Performance Record.

2. Core Skill Basic Qualification Events

DESG-600	0.0
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Goal. Designate as STD.

Prerequisite. STD-214

DESG-601	0.0
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Goal. Designate as SID.

Prerequisite. SID-233

QUAL-602

Goal. Qualify as MC.

Prerequisite. GBAD-303.

QUAL-603

Goal. Qualify as AIC.

Prerequisite. AIC-320.

DESG-604

Goal. Designate as WC.

Prerequisites. QUAL-602 and QUAL-603.

DESG-605

Goal. Designate as SWD.

Prerequisite. SWD-403.

DESG-606

Goal. Designate as SAD.

Prerequisite. SAD-417.

DESG-607

Goal. Designate as SOPS.

Prerequisite. SOPS-422.

DESG-608

Goal. Designate as SADC.

Prerequisite. SADC-432.

DESG-620

Goal. Designate as INST.

Prerequisite. INST-501.

DESG-621

Goal. Designate as AICS.

Prerequisite. AICS-512.

DESG-630

Goal. Designate as WTI.

Prerequisite. Completion of MAWTS-1 WTI course.

DESG-631

Goal. Designate as JICO.

Prerequisite. Completion of JMTS JICO course.

DESG-632

Goal. Designate as AICI.

Prerequisite. Completion of MAWTS-1 MDTC or TOPGUN AIC SFTI course.

160. SPECIAL TRAINING REQUIREMENTS

<u>COURSE</u>	<u>ACTIVITY</u>
Marine Division Tactics Course (MDTC)	MAWTS-1
Weapons and Tactics Instructors (WTI) Course	MAWTS-1
Multi-TADIL Advanced Joint Interoperability Course (MAJIC)	JMTS
JTIDS Course	JMTS
Joint Interface Control Officer Course (JICO)	JMTS
JTIDS Network Design & System Management (JNDSM)	JMTS
AOC IQT Courses	NSAWC

161. EXPENDABLE ORDNANCE REQUIREMENTS. None.

162. PROFICIENCY INTERVALS. Tables 1-13 through 1-16 contain proficiency intervals for the Core Skill Basic, Core Skill Advanced, Core Plus and Instructor phases of training. Once an ADCO attains initial stage qualification/designation, the ADCO is considered core competent for that stage. The exception is when an ADCO is out of the community for 16 months or has not updated the required proficiency interval.

Table 1-13.-- ADCO Proficiency Interval for the
Core Skill Basic Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
SYS	200	2	*	0.3					L
SYS	201	3	*	0.3					L
SYS	202	3	*	0.3					L
SYS	203	1.5	*	0.3					L
SYS	204	2.0	*	0.3					L
SYS	205	2.0	*	0.3					L
STD	210	4	*	1.3				X	L
STD	211	8	24	1.3			X		L/S
STD	212	8	24	1.3			X		S/L
STD	213	8	*	1.3				X	L
STD	214	8	*	1.4	X		X	X	L
SID	220	4	*	0.3				X	S/L
SID	221	8	*	0.3				X	L/S
SID	222	8	*	0.3				X	L/S
SID	223	8	*	0.3				X	L/S
SID	224	8	*	0.3				X	L/S
SID	225	8	*	0.3					L/S
SID	226	8	*	0.3					L
SID	227	8	24	0.3			X		L/S
SID	228	8	*	0.3					L
SID	229	12	*	0.3				X	S/L
SID	230	4	*	0.3					L/S
SID	231	8	24	0.8			X		S/L
SID	232	8	*	0.8				X	L
SID	233	4	*	1.7				X	L

Table 1-14.-- ADCO Proficiency Interval for the
Core Skill Advanced Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
GBAD	300	2.0	*	1.25					L/S
GBAD	301	4.0	*	1.25			X		L/S
GBAD	302	8.0	24	1.25				X	L/S
GBAD	303	8.0	*	1.25				X	L/S
AIC	310	0.5	*	1.0			X		S
AIC	311	1.5	*	1.0			X		S
AIC	312	1.5	*	1.0			X		S
AIC	313	1.5	*	1.0			X		S
AIC	314	4.0	*	1.0				X	S
AIC	315	2.0	*	1.5					L
AIC	316	12.0	*	1.5					L
AIC	317	4.0	*	1.5	X		X		L
AIC	318	4.0	*	1.5					L
AIC	319	4.0	24	1.5				X	L
AIC	320	4.0	*	2.5				X	L

Table 1-15.-- ADCO Proficiency Interval for the
Core Plus Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
SWD	400	8.0	*	.25			X		L/S
SWD	401	4.0	24	.25			X		S
SWD	402	16.0	*	.25				X	L
SWD	403	12.0	*	.5				X	L
SAD	410	8.0	*	.25					L
SAD	411	24.0	*	.25			X		L
SAD	412	8.0	*	.25			X		L/S
SAD	413	16.0	*	.25			X		L/S
SAD	414	8.0	*	.25					S
SAD	415	8.0	*	.25				X	L
SAD	416	16.0	24	.25				X	L
SAD	417	8.0		.5				X	L
SOPS	420	8.0		.25			X		L/S
SOPS	421	16.0	24	.25				X	S/L
SOPS	422	16.0		.25				X	L
SADC	430	8.0		.25			X		L
SADC	431	16.0	24	.25				X	S
SADC	432	16.0	*	.25				X	L

Table 1-16.-- ADCO Proficiency Interval for the Instructor Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
INST	500	6						X	L
INST	501	4						X	L/S
AICS	510	6						X	S/L
AICS	511	6						X	L
AICS	512	16						X	L

163. EVENT UPDATE CHAINING. Table 1-17 contains the event update chaining for the ADCO.

Table 1-17.-- ADCO Event Update Chaining.

Event	Events Updated
200	
201	
202	
203	
204	
205	
210	
211	
212	211
213	211, 212
214	211, 212
220	
221	
222	
223	
224	
225	
226	
227	
228	
229	
230	
231	227
232	227, 231
233	227, 231

Table 1-17.-- ADCO Event Update Chaining--Continued.

Event	Events Updated
300	
301	
302	
303	302
310	
311	
312	
313	
314	
315	
316	
317	
318	
319	
320	319
400	
401	
402	401
403	401
410	
411	
412	
413	
414	
415	
416	
417	416
420	
421	
422	421
430	
431	
432	431
500	
501	500
510	
511	
512	

T&R MANUAL, TAOC

CHAPTER 2

TACTICAL AIR DEFENSE CONTROLLER (TADC) (MOS 7236)

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CHAPTER 2

TACTICAL AIR DEFENSE CONTROLLER (TADC)
(MOS 7236)

200. INTRODUCTION

1. The purpose of the Marine Aviation Training and Readiness (T&R) program is to provide the commander with standardized programs of instruction for all aviation personnel. The goal is to develop unit warfighting capabilities, not to measure the proficiency of individuals. Syllabi are based on specific performance standards designed to ensure proficiency in core competencies. An effective T&R program is the first step in providing the MAGTF Commander with an Aviation Combat Element (ACE) capable of accomplishing any and all of its stated missions. The T&R program provides the fundamental tools for commanders to build and maintain unit combat readiness. Using these tools and the unit training managers can construct and execute an effective training plan which supports the unit's mission essential tasks.

2. Unit training management is the application of the Marine Corps Training Principles and the Systems Approach to Training (SAT) to satisfy the training requirements of commanders at all levels in order to accomplish their wartime mission. Guidance concerning unit training management and the process for establishing effective unit training management programs are contained in MCRP 3-0A, Unit Training Management Guide, and form the basis for the development of this T&R Manual. Familiarity with MCRP 3-0A will enhance your understanding of the SAT used in T&R development and Marine Corps UTM principles.

3. To maintain congruity in aviation and ground T&R programs, CG TECOM (C4610) is coordinating an update to the aviation unit evaluation mechanism. Efforts are underway to incorporate Collective Training Standards (CTS) into aviation T&R manuals. The goal of this effort is to replace MCCRES Mission Performance Standards (MPS) with T&R CTS and utilize T&R as the unit evaluation mechanism. Like MPS, CTS are criteria that specify mission and functional area unit proficiency standards for combat, combat support, and combat service support units.

4. The effort to replace MCCRES MPS with T&R CTS is in the development phase. The concept is to create separate unit chapters in all aviation T&R manuals which contain unit CTS in the form of unit events. CTS will be derived and implemented into T&R manuals using existing unit MCCRES MPS as a baseline. Unit evaluation will be standardized in T&R manuals, not in a separate document. CG TECOM (C4610) plans to cancel unit MCCRES orders as respective unit CTS chapters are approved. Until unit T&R CTS are formally approved, MCCRES shall be utilized as the aviation unit evaluation standard.

201. CORE COMPETENCIES/SKILLS

1. Core competency serves as the foundation of the T&R program. Core competencies are those core capabilities and skills that support the Mission Essential Tasks (METL), derived from FMFM 5-1 and T/O mission statements, which are realistically expected to be assigned in combat.

2. Mission. Detect, identify and control the intercept of hostile aircraft and missiles and to provide air direction and control to friendly aircraft in the accomplishment of support missions.

3. TAOC Mission Essential Tasks

a. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations (A).
- Conduct expeditionary operations to include the capability to phase control ashore.

b. (UJTL TA 2.4) Disseminate Tactical Warning Information and Attack (B).

c. (UJTL TA 3.2.7) Conduct Air and Missile Defense Operations (C).
- Conduct air surveillance.
- Control surface and airborne weapons systems.
- Conduct theater missile defense weapons systems management.

d. (UJTL TA 3.2.8) Conduct Air-to-Air Operations (D).
- Control airborne weapons systems.

e. (UJTL TA 3.3) Coordinate Battlespace Maneuver and Integrate with Firepower (E).
- Conduct combat airspace management.
- Integrate with MAGTF, joint, and combined airspace command and control systems.

f. (UJTL TA 5.2.1) Establish, Operate and Maintain Baseline Information Exchange (F).
- Conduct combat airspace management.
- Integrate with MAGTF, joint, and combined airspace command and control systems.

g. (UJTL TA 6.5) Provide for Combat Identification. Conduct air surveillance (G).

h. (UJTL TA 7.1) Conduct Mission Operations in a CBRNE Environment (H).
- Conduct combat operations in an NBC environment.

CORE SKILLS	METs							
	A	B	C	D	E	F	G	H
Tactical Air Traffic Control				X	X			X
Combat Identification and Surveillance		X	X	X			X	X
Air Intercept Control			X	X				X
Missile Control			X		X			X
Data Link Coordination		X	X	X			X	X
Air Battle Management	X	X	X	X	X	X	X	X

4. TAOC Core Capability. A core capable TAOC is task organized to provide three combat crews to execute the following functions: tactical air traffic control (TATC), combat identification and surveillance, air intercept control, missile control, data link coordination, and air battle management; and is capable to sustain 24-hour operations in support of a MEF.

5. EW/C Core Capability. A core capable EW/C augments the TAOC or deploys independently to provide limited TATC, combat identification and surveillance, air intercept control, missile control, and data link coordination; and is able to sustain 24-hour operations.

6. TAOC Detachment Crew Configuration

a. TAOC Crew

- 1 Senior Air Director.
- 1 Senior Weapons Director.
- 2 Air Intercept Controllers.
- 1 Missile Controller.
- 2 Assistant Weapons Controllers.
- 1 Senior Traffic Director.
- 1 Tactical Air Traffic Controller.
- 1 Surveillance Identification Director.
- 2 Surveillance Operators.
- 1 Data Link Coordinator.
- 1 Systems Configuration Coordinator.

b. Sector Air Defense Facility Crew

- 1 Sector Air Defense Commander.
- 1 Sector Air Defense Facility Operations Officer.
- 1 Sector Air Defense Facility Crew Chief.
- 2 Sector Air Defense Facility Operators.
- 1 GBAD Representative (covered in separate T&R).
- 1 Intelligence Officer (covered in separate T&R).
- 1 Aviation Representative (covered in separate T&R).

7. Core Competency. Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum core skill proficiency and minimum numbers of leaders per paragraphs 7a and 7b below.

a. Minimum Unit Core Skill Requirements. In order to be considered core competent, a unit must possess a minimum of crewmembers who are competent in each core skill. In order to be considered competent in a core skill, an individual must attain and maintain proficiency in core skill events, as delineated in paragraphs 7a(1) and 7a(2) below. The first number in the table represents the personnel required for a core competent TAOC crew, and the number in parenthesis represents the number required for a core competent EW/C crew.

TAOC (EW/C)			
CORE SKILL	7210/7202	7236	7234
Tactical Air Traffic Control	2(0)	1(1)	3(1)
Combat Identification and Surveillance	1(1)	2(1)	6(3)
Air Intercept Control	2(0)	4(3)	6(3)
Missile Control	1(0)	2(0)	0(0)
Data Link Coordination	0(0)	0(0)	3(3)
Air Battle Management	11(5)	1(1)	0(0)

Note: Columns 2, 3, 4: First number represents personnel required for a core competent TAOC crew; the number in parenthesis represents personnel required for a core competent EW/C crew.

(1) Events Required to Attain Individual Core Skill Competency. To initially attain competency in a core skill, an individual must successfully complete all of the T&R events listed in the chart below.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination	Air Battle Management
7210/7202 T&R Event Requirements to Attain Competency	STD-214	SID-243	AIC-325	GBAD-303	SID-243	SWD-403 SAD-417 SOPS-422 SADC-432
7236 T&R Event Requirements to Attain Competency	STD-303	SID-322	AIC-225	GBAD-203	SID-322	SWD-333 SAD-407
7234 T&R Event Requirements to Attain Competency	TATC-313	SO-214	AWC-224		DLC-306	SDFO-404 SDFC-411

(2) Events Required to Maintain Individual Core Skill Competency. To maintain competency in a core skill, an individual must maintain proficiency in all of the core skill events listed in the chart below.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination
7210/7202 T&R Event Requirements to Maintain Competency	None	SID-227 SID-231	AIC-319	GBAD-302	None
7236 T&R Event Requirements to Maintain Competency	None	SID-316 SID-320	AIC-219	GBAD-202	None
7234 T&R Event Requirements to Maintain Competency	TATC-313	SO-214	None	None	DLC-306

b. Minimum Flight Leader Requirements. As a minimum, in order to be considered core competent, a unit must possess the following number of crews with the listed leadership designations.

LEADERSHIP DESIGNATION	TAOC(EW/C) TOTAL (7200's)
SADC	3(0)
SADC OPS	3(0)
SAD	3(3)
SWD	3(3)
STD	3(1)
SID	3(2)

202. SUMMARY/INDEX OF LIVE/SIMULATED EVENTS

1. Core Skill Introduction Training. The Core Skill Introduction training summary is contained in the MCCES POI for the TADC.

2. Core Skill Basic Training. Table 2-1 contains a listing of the Core Skill Basic training events and associated page numbers.

Table 2-1.-- Core Skill Basic Training Events.

EVENT	GOAL	PAGE
GBAD-200	Perform MC functions	2-28
GBAD-201	Perform MC functions	2-28
GBAD-202	Perform MC functions	2-29
GBAD-203	Qualify as MC	2-29
AIC-210	Take appropriate action for an aircraft emergency	2-31
AIC-211	Control a simulated section of fighter aircraft	2-31
AIC-212	Control a simulated section of fighter aircraft	2-32
AIC-213	Control a simulated division of fighter aircraft	2-32
AIC-214	Perform as AIC	2-33
AIC-215	Perform AIC functions from a TAOC Radar	2-33
AIC-216	Control a section/division of fighter aircraft	2-34
AIC-217	Control a section/division of fighter aircraft	2-34
AIC-218	Control a section/division of fighter aircraft	2-34
AIC-219	Perform as AIC	2-35
AIC-220	Qualify as AIC	2-35

3. Core Skill Advanced Training. Table 2-2 contains a listing of the Core Skill Advanced training events and associated page numbers.

Table 2-2.-- Core Skill Advanced Training Events.

EVENT	GOAL	PAGE
STD-300	Conduct tactical planning for the Traffic Section	2-36
STD-301	Perform as STD	2-37
STD-302	Perform as STD	2-37
STD-303	Designate as STD	2-38
SID-310	Perform as DLC	2-39
SID-311	Perform DLC functions	2-39
SID-312	Perform DLC functions	2-40
SID-313	Perform DLC functions	2-40
SID-314	Prepare/Set-up ADCP as a stand-alone system	2-40
SID-315	Prepare/Set-up ADCP within TAOM configurations	2-41
SID-316	Conduct tactical planning for the Surveillance Section	2-41
SID-317	Maximize RADAR performance	2-42
SID-318	Plan for emplacement and employment of a TMD Site	2-42
SID-319	Perform EW Operations	2-43
SID-320	Perform as SID	2-43
SID-321	Perform as SID	2-44
SID-322	Designate as SID	2-44
SWD-330	Conduct tactical Planning for the Weapons Section	2-45
SWD-331	Perform as SWD	2-46
SWD-332	Perform as SWD	2-46
SWD-333	Designate as SWD	2-46

4. Core Plus Training. Table 2-3 contains a listing of the Core Plus training events and associated page numbers.

Table 2-3.-- Core Plus Training Events.

EVENT	GOAL	PAGE
SAD-400	Perform system troubleshooting	2-47
SAD-401	Perform as SAD	2-48
SAD-402	Conduct tactical planning for the Command Section	2-48
SAD-403	Perform as SAD	2-49
SAD-404	Perform as SAD	2-49
SAD-405	Perform site emplacement for a TAOC	2-50
SAD-406	Perform as SAD	2-50
SAD-407	Designate as SAD	2-50

5. Instructor Training. Table 2-4 contains a listing of the instructor training events and associated page numbers.

Table 2-4. - Instructor Training Events.

EVENT	GOAL	PAGE
INST-500	Conduct a period of instruction	2-51
INST-501	Instruct, monitor, evaluate and debrief a student	2-51
AICS-510	Develop instruction techniques	2-52
AICS-511	Instruct section and division tactics	2-53
AICS-512	Instruct, monitor and debrief an AIC	2-53

6. Operator Core Skills. Core skills are depicted in the following matrix (table 2-5) and directly support the METL for each unit. Core skills shall be a determining factor in developing T&R training requirements. Special skills and training requirements must receive appropriate prioritization and emphasis based on the training need and the likelihood of those types of missions being assigned during operations.

Table 2-5.-- Core and Core Plus Skills.

EVENT CODES	METLS							
	A	B	C	D	E	F	G	H
	CORE SKILLS							
GBAD-200	X	X	X				X	X
GBAD-201	X	X	X				X	X
GBAD-202	X	X	X				X	X
GBAD-203	X	X	X				X	X
AIC-210	X	X	X	X			X	X
AIC-211	X	X	X	X			X	X
AIC-212	X	X	X	X			X	X
AIC-213	X	X	X	X			X	X
AIC-214	X	X	X	X			X	X
AIC-215	X	X	X	X			X	X
AIC-216	X	X	X	X			X	X
AIC-217	X	X	X	X			X	X
AIC-218	X	X	X	X			X	X
AIC-219	X	X	X	X			X	X

Table 2-5.-- Core and Core Plus Skills--Continued.

EVENT CODES	METLS							
	A	B	C	D	E	F	G	H
	CORE SKILLS							
AIC-220	X	X	X	X			X	X
STD-300	X	X	X	X			X	X
STD-301	X	X	X	X			X	X
STD-302	X	X	X	X			X	X
STD-303	X	X	X	X			X	X
SID-310	X	X	X		X	X	X	X
SID-311	X	X	X		X	X	X	X
SID-312	X	X	X		X	X	X	X
SID-313	X	X	X		X	X	X	X
SID-314	X	X	X		X	X	X	X
SID-315	X	X	X		X	X	X	X
SID-316	X	X	X		X	X	X	X
SID-317	X	X	X		X	X	X	X
SID-318	X	X	X		X	X	X	X
SID-319	X	X	X		X	X	X	X
SID-320	X	X	X		X	X	X	X
SID-321	X	X	X		X	X	X	X
SID-322	X	X	X		X	X	X	X
SWD-330	X	X	X			X	X	X
SWD-331	X	X	X	X		X	X	X
SWD-332	X	X	X	X		X	X	X
SWD-333	X	X	X	X		X	X	X
CORE PLUS								
SAD-400	X	X	X			X		X
SAD-401	X	X	X			X		X
SAD-402	X	X	X			X		X
SAD-403	X	X	X			X		X
SAD-404	X	X	X			X		X
SAD-405	X	X	X			X		X
SAD-406	X	X	X			X		X
SAD-407	X	X	X			X		X

203. UNIT TRAINING POLICIES

1. The unit's training program emphasizes qualifications and overall combat readiness of the unit. Individual training serves as the building block for overall unit readiness. However, unit training will never be compromised for the training of a select, few individuals. Squadron and battalion commanding officers will ensure that this training philosophy is implemented. Unit training must predominate, and squadrons must tailor their training plans to ensure unit combat readiness.

2. The training of Marines to perform as an integral aviation unit in combat lies at the heart of the T&R program. Unit readiness and

individual readiness are directly related. Individual training and the mastery of individual core skills serve as the building blocks for unit combat readiness. A Marine's ability to perform those critical skills required in combat is essential.

3. Commanders shall ensure all tactical training is conducted to a MCCRES standard. The MCCRES, as outlined in MCO P3501.1, is the unit training standard and all syllabus events shall be tailored to meet MCCRES requirements. Commanders at all levels are responsible for effective aviation training. The conduct of training in a professional manner consistent with Marine Corps standards cannot be overemphasized.

4. Commanders must be cognizant of the numerous factors affecting unit training on a daily basis. Factors which all commanders must address include, but are not limited to:

a. Efficiency. Time and resources expended are measurements for training efficiency. Commanders must ensure all training increases combat readiness. Unit personnel shall thoroughly plan and effectively execute training to maximize return on their time and effort.

b. Individual Differences. Commanders must recognize the differences inherent in each individual and should mold flexible training programs to accommodate those differences.

c. Decentralization of Training. The lowest echelon possible shall be responsible for conducting training. Each senior level of command must monitor subordinate commands to ensure safe and efficient training requirements.

5. Commanders shall provide personnel the opportunities to attend formal and operational level courses of instruction as required by this Manual. Attendance at all formal courses must enhance the warfighting capabilities of the unit.

6. Risk Management. Operational Risk Management (ORM) is a process to aid commanders in accomplishing their missions while protecting the force. Commanders, leaders, maintainers, planners and schedulers should integrate risk assessment in the decision making process and implement hazard controls to eliminate risk or reduce it to acceptable level.

7. MACCS Integrated System Training. All elements of the MACCS shall maintain the capability to effectively function as part of an integrated airspace command and control system. In that large exercises may not always offer sufficient training opportunity for all crewmembers, and in many cases do not offer sufficient latitude to refine capability upon arrival, the MACCS should conduct MACCS Integrated System Training Exercises (MISTEX) on a regular basis to qualify units and personnel per their respective T&R syllabus. MISTEXs should focus on the establishment of necessary communications and data links between MACCS agencies, and incorporate sufficient simulation and MSEL items to exercise and analyze system integration, crew coordination and critical information flow wherever possible. Tactical data link capable agencies should conduct frequent "link" training exercises to maintain proficiency.

8. Instructor/Evaluators. Commanders must ensure that training is conducted with proper instructor/evaluator support. **All unqualified operators will have a dedicated instructor when performing syllabus training. No more than 50% of any one section of the TAOC crew can be comprised of student operators.**

204. TACTICAL AIR DEFENSE CONTROLLER TRAINING PROGRESSION PHILOSOPHY. The purpose of this syllabus is to develop and refine those skills required for the TADC to function as a weapons controller with progression into a director position within a core capable TAOC crew. The progression of the TADC through the syllabus has been tailored towards that end. With the initial focus on weapons control skills and the opportunity to progress to the SWD position, the experienced TADC is more effectively employed. It is incumbent upon the squadron commander to ensure each event is completed in accordance with each performance standard established for that event.

205. TACTICAL AIR DEFENSE CONTROLLER (TADC) TRAINING PROGRESSION MODEL

1. The Training Progression Model for the TADC is depicted in figure 2-1.

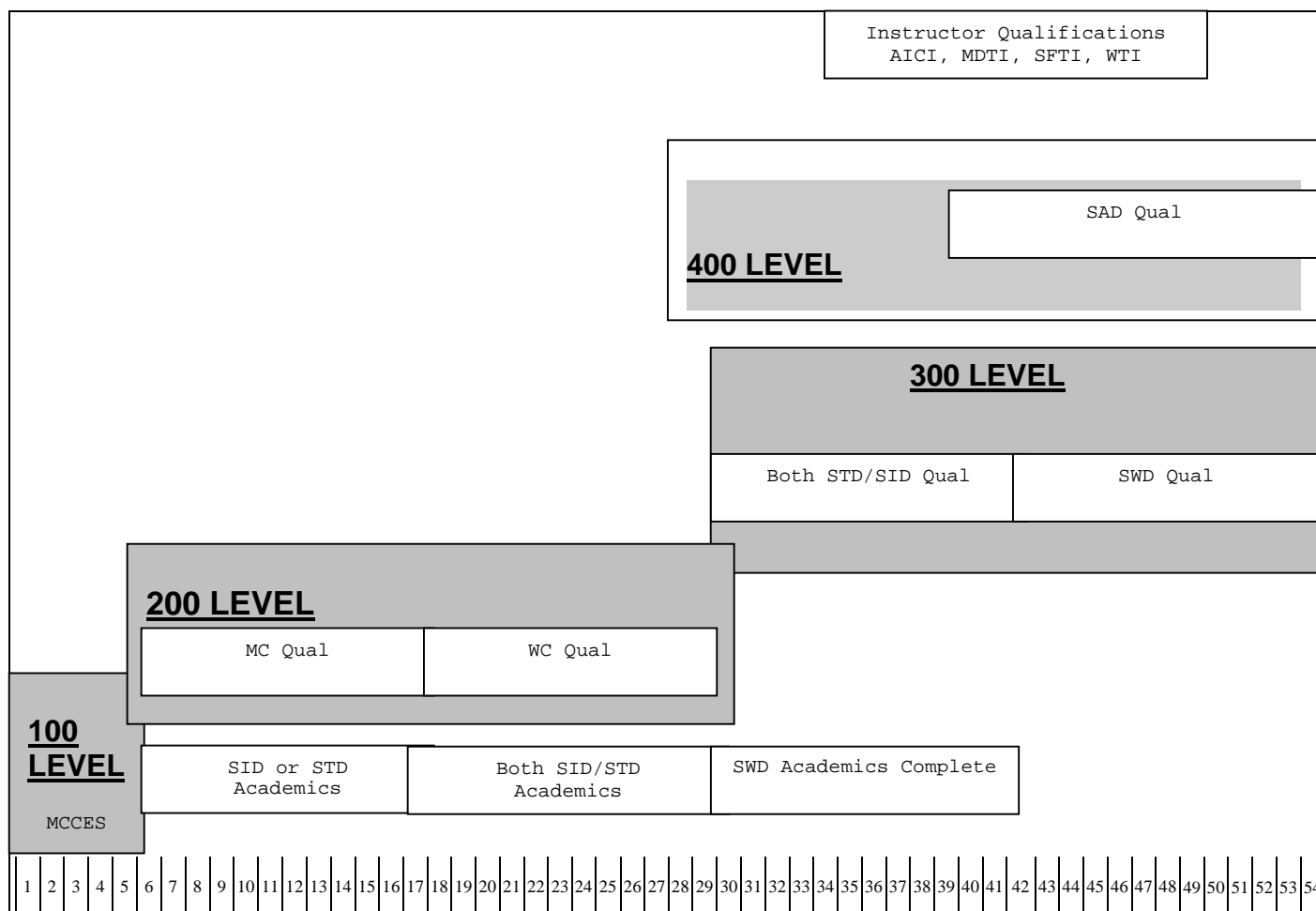


Figure 2-1.-- Tactical Air Defense Controller Training Progression Model.

2. This model depicts the **logical progression of qualifications** within a unit. The base of each model contains the "initial" qualifications an individual receives after completion of the MOS-qualifying school. The highest level of the progression model will contain those qualifications held by only the most experienced personnel within a unit.

3. The Core Skill Introduction phase, or 100 level events, will be completed at Tactical Air Defense Controller Course (TADCC), MCCES, 29 Palms, CA.

4. The Core Skill Basic phase, or 200 level events, moves a TADC from a basic understanding of core skills to proficiency in basic core skills. This phase is normally accomplished during the first two years of assignment to an operational unit. Significant training for this stage includes qualifying as a WC. The AIC or MC qualification should be completed during the first year. Training in this phase does not preclude simultaneous training in the Core Plus phase. A TADC is Weapons Controller (WC) designated after having completed the required events of the Core Skill Basic phase of the appropriate T&R syllabus. The TADC shall be certified by a Qualified TAOC SAD, AICI and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

5. The Core Skill Advanced phase, or 300 level events, contains advanced core skill training. Significant training includes completion of SID and STD syllabi and WC designation.

a. Surveillance Identification Director (SID) Designation. A TADC is SID designated after completing required events in the Core Skill Advanced phase of the appropriate T&R syllabus. The TADC shall be certified by a Core Plus TAOC SAD, TAOC WTI/MEWTI and designated by the unit commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Senior Traffic Director (STD) Designation. A TADC is STD designated after completing required events in the Core Skill Advanced phase of the appropriate T&R syllabus. The TADC shall be certified by a TAOC SAD, TAOC WTI/MEWTI and designated by the unit commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

6. The Core Plus phase, or 400 level events, contains skill training an ADCO may accomplish. These events are typically completed during a second tour but does not preclude training at the 400 level during the first tour.

a. Senior Weapons Director (SWD) Designation. A TADC is SWD designated after completing required events in the Core Plus phase of the appropriate T&R syllabus. The TADC shall be certified by a TAOC SAD, TAOC WTI/MEWTI and designated by the unit commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Senior Air Director (SAD) Designation. An ADCO is SAD designated after completing required events of the Core Plus phase of the appropriate T&R syllabus. The ADCO shall be certified by a TAOC SAD, TAOC WTI or the MAWTS-1 TAOC instructor and designated by the unit commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

7. The unit's training progression model provides training officers with a valuable tool to develop training plans. With a clear progression model and an emphasis on qualifying personnel in Core Skill Introduction and Core Skill Basic phases, training officers have the ability to produce viable training plans. Units will use the model as a point of departure to generate weekly, monthly, quarterly and annual training plans.

206. PROGRAMS OF INSTRUCTION (POI) FOR THE TADC

1. Basic TADC

<u>WEEKS</u>	<u>COURSE</u>	<u>ACTIVITY</u>
5	TACTICAL AIR DEFENSE CONTROLLER COURSE (TADCC)	MCCES

2. TADC transition and refresher training will be accomplished at the individual MACS.

207. INSTRUCTOR (INST) DESIGNATIONS

1. Instructor Designation. A TADC is INST designated after completing the required events of the appropriate T&R syllabus with the exception of AICI. The TADC will be certified by a TAOC WTI and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

2. Air Intercept Control Supervisor (AICS) Designation. A TADC is designated a AICS after completing the required events of the appropriate T&R syllabus. The TADC will be certified by an Air Intercept Control Instructor (AICI), and designated by the commanding officer. A designation letter shall be entered in the crewmember's MACCS Performance Record.

210. GROUND/ACADEMIC TRAINING

1. Academic training will be conducted for each phase/stage of the syllabus. Commanders and will incorporate the lectures in table 2-6 into the training plans. Where indicated, standardized academic training materials exist and may be obtained from the activity listed as the sponsor.

Table 2-6.-- MACCS Academic Course of Instruction.

LECTURE CODE	LECTURE TITLE	SPONSOR
200 LEVEL: CORE SKILL BASIC		
A-01	MAGTF Organization	MCCES
A-02	MACCS Organization	MCCES
A-03	The Six Functions of Marine Aviation	MAWTS-1 ASP
A-04	- Control of Aircraft & Missiles	MAWTS-1 ASP
A-05	- Offensive Air Support	MAWTS-1 ASP
A-06	- Assault Support	MAWTS-1 ASP
A-07	- Electronic Warfare	MAWTS-1 ASP
A-08	- Aerial Reconnaissance	MAWTS-1 ASP
A-09	- Anti-Air Warfare	MAWTS-1 ASP
A-09	Air Tasking Order/Special Instructions	MCCES
A-10	MACCS Training Management	MCCES
A-11	MACCS Reference Material	MCCES
A-12	Local AOR Contingencies & OP PLANS	Local MACG
A-13	ROE Overview	MAWTS-1 ASP
A-14	MACCS Communications	MAWTS-1 ASP
A-15	TBMCS Overview	MAWTS-1 ASP
A-16	Data Link Symbolology	MCCES
A-17	Manual Crosstell procedures	MCCES
A-18	Encryption & Authentication Procedures	MCCES
A-19	COMSEC & Crypto handling	MCCES
300 LEVEL: CORE SKILL ADVANCED		
B-01	ASM/SSM Threat	MAWTS-1 ASP
B-02	Fixed Wing Threat	MAWTS-1 ASP
B-03	Rotary Wing Threat	MAWTS-1 ASP
B-04	REC Threat	MAWTS-1 ASP
B-05	Ground Threat	MAWTS-1 ASP
B-06	AOR Specific Threat & OP PLANS	Local MACG
B-07	TACC	MAWTS-1 ASP
B-08	TAOC	MAWTS-1 ASP
B-09	DASC	MAWTS-1 ASP
B-10	ATC Detachment	MAWTS-1 ASP
B-11	MAGTF GBAD	MAWTS-1 ASP
B-12	MWCS	MAWTS-1 ASP
B-14	AEW	MAWTS-1 ASP
B-15	MACCS/Joint Data link	MAWTS-1 ASP
B-16	USMC Aviation Ordnance	MCCES
B-17	Phasing Control Ashore	MAWTS-1 ASP
B-18	Airspace Planning/Management (Combat Airspace)	MAWTS-1 ASP
B-19	Tanker Management	MAWTS-1 ASP
B-20	Armed Reconnaissance	MAWTS-1 ASP
B-21	UAV Programs & Integration	MAWTS-1 WTI *
B-22	Link Architecture & Procedures	MAWTS-1 WTI *
B-23	CSAR/TRAP	MAWTS-1 ASP
B-24	NEO Execution	MAWTS-1 ASP
B-25	Execution Checklist	MAWTS-1 WTI *

Table 2-6.-- MACCS Academic Course of Instruction--Continued.

LECTURE CODE	LECTURE TITLE	SPONSOR
400 LEVEL: CORE PLUS		
C-01	Integrated Combat Airspace Command & Control (ICAC ²)	MAWTS-1 ASP
C-02	Joint Air Operations	MAWTS-1 ASP
C-03	Theater Missile Defense	MAWTS-1 WTI *
C-04	MACCS in support of Special Operations	MAWTS-1 WTI *
C-05	ROE Development	MAWTS-1 WTI *
C-06	SIS Aircraft	MAWTS-1 ASP
C-07	JTAO Procedures	MCCES

(*) Lecture codes are standardized throughout MACCS related syllabi and are used to link ATRIMS software to a specific T&R event. Lecture Codes may not be listed sequentially.

2. Academic training listed in table 2-7 is required for personnel assigned to the TAOC.

Table 2-7.--TAOC Academic Syllabus.

CODE	CLASS TITLE
T-01	AAW ANTI-AIR WARFARE DOCTRINE
T-02	ADC RESPONSIBILITIES
T-03	AI CONTROL/ TACTICAL TERMINOLOGY
T-04	AIR DEFENSE COMMUNICATIONS PLATFORM
T-05	AIRSPACE MANAGEMENT
T-06	ATACC REQUIREMENTS
T-07	ATDL-1
T-08	ATO'S AND FRAG'S
T-09	BRIEFING & DEBRIEFING FOR THE AIC
T-10	C&M PANEL
T-11	C41 SYSTEMS
T-12	CAP MANAGEMENT
T-13	COMMUNICATIONS BREVITY
T-14	CREW COORDINATION
T-15	DATA LINK TROUBLESHOOTING
T-16	EMCON PLANNING AND IMPLEMENTATION
T-17	EMERGENCY PROCEDURES
T-18	EP CAPABILITIES
T-19	FIGHTER MISSIONS
T-20	FIRE SUPPORT COORDINATING MEASURES
T-21	FLIGHT SUPERVISORS BRIEFING & DEBRIEFING PROCEDURES
T-22	GBAD VOICE CONTROL PROCEDURES
T-23	GBDL
T-24	IADS EMPLOYMENT
T-25	IDENTIFICATION PROCEDURES

Table 2-7.--TAOC Academic Syllabus--Continued.

CODE	CLASS TITLE
T-26	INTERCEPT CONTROL
T-27	INTERFACE COORDINATION
T-28	JOINT CLOSE AIR SUPPORT
T-29	JRCC OPERATIONS
T-30	JTAO DATA LINK OPERATIONS
T-31	LINK OPS MESSAGES
T-32	MACCS INFORMATION FLOW
T-33	MANUAL CROSSTELL
T-34	NATIONAL SYSTEMS DATA
T-35	OPLANS AND OPORDs
T-36	PHASE CONTROL
T-37	RADAR EMPLOYMENT & PERFORMANCE
T-38	RADIO SETUP
T-39	RADIO SETUP, REPP/SEPP
T-40	REMOTE RADAR
T-41	RULES OF ENGAGEMENT
T-42	SCC RESPONSIBILITIES
T-43	SENSOR REGISTRATION
T-44	SIM SCENARIO EXECUTION
T-45	SIM SCENARIO GENERATION
T-46	SURVEILLANCE BRIEF
T-47	SURVEILLANCE COMMUNICATIONS
T-48	SURVEILLANCE SECTION RESPONSIBILITIES
T-49	SWD COORDINATION REQUIREMENTS
T-50	SYSTEM ECHELON
T-51	SYSTEM TROUBLESHOOTING
T-52	T&R PROGRAM
T-53	TADIL A
T-54	TADIL B/NATO LINK 1
T-55	TADIL C
T-56	TADIL J
T-57	TANKER MANAGEMENT
T-58	TAOC COMMUNICATIONS
T-59	TAOC CREW BRIEF
T-60	TAOC DATLINK CAPABILITIES
T-61	TAOC EMPLOYMENT & POWER REQUIRMENTS
T-62	TAOC REPORTS & FORMATS
T-63	TBMCS
T-64	TDC RESPONSIBILITIES
T-65	TDS PLATFORMS

Table 2-7.--TAOC Academic Syllabus--Continued.

CODE	CLASS TITLE
T-66	THEATER AIR GROUND SYSTEMS
T-67	THEATER MISSILE DEFENSE
T-68	THREAT AIRCRAFT
T-69	THREAT GROUND AND NAVAL FORCES
T-70	THREAT MISSILES
T-71	THREAT TACTICS
T-72	TRAFFIC BRIEF
T-73	TRAFFIC COMMUNICATIONS
T-74	TRAFFIC SECTION RESPONSIBILITIES
T-75	TRAP TACTICAL RECOVERY OF AIRCRAFT AND PERSONELL
T-76	US/ALLIED AIRCRAFT
T-77	US/ALLIED GROUND AND NAVAL FORCES
T-78	US/ALLIED MISSILES
T-79	WEAPONNEERING
T-80	WEAPONS AIRSPACE MANAGEMENT
T-81	WEAPONS BRIEF
T-82	WEAPONS COMMUNICATIONS
T-83	WEAPONS CONTROL FROM TAOC RADARS
T-84	WEAPONS DATA LINK ORDERS
T-85	WEAPONS MODES OF OPERATIONS
T-86	WEAPONS SECTION RESPONSIBILITIES
T-87	WEATHER

3. External academic courses of instruction available to complete the syllabus are listed below.

COURSE	ACTIVITY
Weapons and Tactics Instructors (WTI) Course	MAWTS-1
Multi-TADIL Advanced Joint Interoperability Course (MAJIC)	JMTS
JTIDS Course	JMTS
Joint Interface Control Officer (JICO) Course	JMTS
JTIDS Network Design & System Management (JNDMS)	JMTS
Joint Aerospace Computer Applications Course	C2WS
Joint Air Tasking order Process (JATOP) Course	C2WS
Joint Doctrine Air Campaign Course (JDACC)	AV
Air Operations Course, Initial Qual Training (AOC IQT)	NSAWC
Marine Division Tactics Course (MTDC)	MAWTS-1

4. The academic syllabus sponsor will conduct an annual academic syllabus review.

211. TRAINING REFERENCES

1. Training references in tables 2-8 through 2-12 shall be utilized to ensure safe and standardized training procedures, performance steps, grading criteria, and equipment operation.

Table 2-8.--Combined/Joint/Joint-Related Publications.

PUBLICATION	TITLE	SECTION
ACP-125	Allied Communication Publication	SADF, CMD
CJCSI 3121.01A	Standing Rules of Engagement for US Forces	SADC, SADC OPS, SAD, WEPS
CJCSI 3320.03	Joint Communications Electronics Operation Instructions	SADF, CMD
CJCSI 6232.01A	Deconflicting JTIDS/MIDS Operations	SURV
CJCSI 6240.01A	Training Responsibilities for the Joint Tactical Air Operations Interface Program	CMD, INTSR
CJCSM 3115.01	Joint Data Network (JDN) Operations	SURV, SCC
CJCSM 6120.01A	Joint Multi-Tactical Digital Information Link (TADIL) Operating Procedures	SURV, SCC
CJCSM 6120.05	Manual for Tactical Command and Control Planning Guidance for Joint Operations, Joint Interface Operational Procedures for Message Text Formats	CMD
CJCSM 6230.05	Joint Have Quick Planner's Guide - Joint Employment Guidance	CMD
JP 1	Joint Warfare of the Armed Forces	SADC, CMD
JP 0-2	Unified Actions of Armed Forces (UNAAF)	SADC
JP 3-0	Doctrine for Joint Operations	SADC, CMD
JP 3-01	Joint Doctrine for Countering Air and Missile Threats	SADC, SADC OPS, SAD, WEPS
JP 3-01.2	Joint Doctrine for Theater Counter Air Operations	SADC, SADC OPS, SAD, SWD
JP 3-01.4	Joint Tactics, Techniques, and Procedures (JTTP) for Joint Suppression of Enemy Air Defense	SADC, SADC OPS, SAD, SWD, STD
JP 3-01.5	Doctrine for Joint Theater Missile Defense	SADC, SADC OPS, SAD, SWD
JP 3-02	Joint Doctrine for Amphibious Operations	SADC, SADC OPS, SAD
JP 3-03	Doctrine for Joint Interdiction Operations	SADC, SADC OPS, SAD
JP 3-09	Doctrine for Joint Fire Support	SADC, SADC OPS
JP 3-09.3	JTTP for Close Air Support (CAS)	SADC, SADC OPS, SAD, STD
JP 3-13	Joint Doctrine for Information Operations	SADF, CMD
JP 3-13.1	Joint Doctrine for Command and Control Warfare (C2W)	SADF, CMD

Table 2-8.--Combined/Joint/Joint-Related Publications--Continued.

PUBLICATION	TITLE	SECTION
JP 3-30	Command and Control for Joint Air Operations	SADC, SADC OPS, CMD
JP 3-50.2	Doctrine for Joint Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF
JP 3-50.21	Joint Tactics, Techniques, and Procedures for Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF
JP 3-51	Joint Doctrine for Electronic Warfare	SADC, SADC OPS, CMD
JP 3-52	Doctrine for Joint Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
JP 5-0	Doctrine for Planning Joint Operations	SADC, SADC OPS, CMD
JP 6-0	Doctrine for C4 Systems Support to Joint Operations	SADC, SADC OPS, CMD, SCC
JP 6-02	Doctrine for Employment of Operational/Tactical C4 Systems	SADC, SADC OPS, CMD, SCC
	Joint Tactical Air Operations (JTAO) Interface Training Reference Notebook	SAD, SURV, INSTR
	JTAO Interface Interoperability Handbook	SAD, SURV
	Executive Guide to the JTAO Interface	SADC, SADC OPS
	JTAO Interface Training Plan	SADC, SADC OPS, CMD
	JTAO Computer-Based Training (CBT) Modules	All
	JTAO Video Training Tapes	All
	Understanding Data Links	SADC, SADC OPS, CMD, SURV
	Understanding Link 4A/11/16	SADC, SADC OPS, CMD, SURV

Table 2-9.-- Marine Corps/Multi-Service Publications.

PUBLICATION	TITLE	SECTION
MCDP 1	Warfighting	All
MCDP 1-1	Strategy	SADC, CMD
MCDP 1-2	Campaigning	SADC, SADC OPS, CMD
MCDP 1-3	Tactics	SADC, SADC OPS, CMD
MCDP 2	Intelligence	SADC, SADC OPS, CMD
MCDP 3	Expeditionary Operations	SADC, SADC OPS, CMD
MCDP 4	Logistics	SADC, SADC OPS, CMD
MCDP 5	Planning	SADC, SADC OPS, CMD
MCDP 6	Command and Control	SADC, SADC OPS, CMD
MCWP 0-1	Marine Corps Operations	All

Table 2-9.-- Marine Corps/Multi-Service Publications--Continued.

PUBLICATION	TITLE	SECTION
MCWP 2-1	Intelligence Operations	SADC, SADC OPS, CMD
MCRP 2-11B	Joint STARS	SADC, SADC OPS, SAD, SWD
MCRP 2-12A	IPB	SADC, SADC OPS, CMD
MCRP 3-0A	Unit Training Management Guide	SADC, SADC OPS, CMD, INSTR
MCRP 3-0B	How to Conduct Training	SADC, SADC OPS, CMD, INSTR
MCWP 3-16	Fire Support Coordination in the Ground Combat Element	SADC, SADC OPS, SAD
MCRP 3-16A	TTP for Targeting	SADC, SADC OPS, SAD
MCRP 3-16C	Fire Support for the Combined Arms Commander	SADC, SADC OPS, SAD
MCWP 3-2	Aviation Operations	All
MCWP 3-22	Anti-Air Warfare	All
MCRP 3-22.2A	Suppression of Enemy Air Defenses	All
MCWP 3-23	Offensive Air Support	All
MCWP 3-23.1	Close Air Support	All
MCWP 3-23.2	Deep Air Support	All
MCWP 3-24	Assault Support	All
MCWP 3-25	Control of Aircraft and Missiles	All
MCRP 3-25A	Multi-Service Procedures for JATC	SADC, SAD, TRAF
MCRP 3-25B	Multi-Service Brevity Codes	All
MCRP 3-25C	Intro to TADIL-J and Quick Reference Guide	SADC, SADC OPS, SAD, SID, DLC
MCWP 3-25D	Integrated Combat Airspace Command and Control (ICAC2)	SADC, SADC OPS, CMD, TRAF
MCWP 3-25.2	Multi-service Procedures for the Theater Air-Ground System (TAGS)	All
MCWP 3-25.3	MACCS Handbook	All
MCWP 3-25.4	Marine TACC Handbook	All
MCRP 3-25.4A	JAOC/AAMDC Coordination	SADC, SADC OPS, SAD, SWD
MCWP 3-25.5	DASC Handbook	All
MCWP 3-25.6	SADC Handbook	All
MCWP 3-25.7	TAOC Handbook	All
MCWP 3-25.8	MATCD Handbook	All
MCWP 3-25.9	MACCS Communications Handbook	All
MCWP 3-25.10	LAAD Battalion Handbook	All
MCRP 3-25.10A	Low Altitude Air Defense (LAAD) Gunner's Handbook	CMD
MCWP 3-26	Air Reconnaissance	All
MCWP 3-31.1	Supporting Arms in Amphibious Ops.	All
MCWP 3-35.3A	MTTP Procedures for Aviation Urban Operations	SADC, SADC OPS, SAD
MCWP 3-36	Information Operations	All
MCWP 3-36.1	Electronic Warfare	All
MCWP 3-37	MAGTF NBC Defense Operations	All
MCRP 3-37A	NBC Field Handbook	All
MCWP 3-37.2	NBC Protection	All

Table 2-9.-- Marine Corps/Multi-Service Publications--Continued.

PUBLICATION	TITLE	SECTION
MCWP 3-41.1	Rear Area Operations	All
MCWP 3-42.1	Fire Support in MAGTF Operations	SADC, SADC OPS, SAD
MCWP 5-1	Marine Corps Planning Process	SADC, SADC OPS, CMD
MCRP 5-2A	Operational Terms and Graphics	SADC, SADC OPS, CMD, SADFC, SADFO
MCWP 6-2	MAGTF C2	SADC, SADC OPS, CMD
MCWP 6-22	Communications and Information Systems	SADC, SADC OPS, CMD
MCWP 6-23	MAGTF Information Management	SADC, SADC OPS, CMD
MCRP 6-2.1.2	Tactical Brevity Codes	All
MCO 3501.9B	Marine Corps Combat Readiness Evaluation System (MCCRES)	All
TM 08565B-10/1	Operating Instructions - TAOM AN/TYQ-23(V)4	All
TM 11240 Series	Motor Transport Technical Characteristics	SAD, SCC
	DASC Pocket Checklist	CMD
	TAOC Pocket Checklist	All

Table 2-10.-- Navy Publications.

PUBLICATION	TITLE	SECTION
NWP 3-01.01	Anti-Air Warfare	All
NWP 3-01.10	Anti-Air Warfare Commander's Manual	SADC, SADC OPS, SAD, WEPS
NTTP 3-01.5	AEGIS Core Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-20.4	Surface Warfare Aviation Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-22.5	F/A-18 A/B Tactical Manual	SADC, SADC OPS, SAD, WEPS, AICI
OPNAVINST 3710	NATOPS Manual	SADC, SADC OPS, CMD
	TOPGUN Manual	SADC, SADC OPS, SAD, WEPS, AICI

Table 2-11.-- Air Force Publications.

PUBLICATION	TITLE	SECTION
AFDD 2-1	Air Warfare	SADC, SADC OPS, CMD
AFDD 2-1.1	Counter Air Operations	SADC, SADC OPS, CMD
AFDD 2-1.3	Counter Land	SADC, SADC OPS, CMD
AFDD 2-1.6	Combat Search and Rescue	SADC, SADC OPS, CMD
AFDD 2-1.7	Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
AFDD 2-8	Command and Control	SADC, SADC OPS, CMD
ACH-JFACC	Aerospace Commander's Handbook (ACH): The JFACC	SADC, SADC OPS, CMD, TRAF
ATTP 3-1 Vol. 1	General Planning and Employment Considerations	All
ATTP 3-1 Vol. 2	Threat Reference Guide	All
ATTP 3-1 Vol. 14	Air Defense	All
ATTP 3-1 Vol. 15	Tactical Employment -AWACS	All
ATTP 3-1 Vol. 26	Theater Air Control Systems	All

Table 2-12.-- Army Publications.

PUBLICATION	TITLE	SECTION
FM 27-10	Law of Land Warfare	SADC, SADC OPS, CMD
FM 44-8	Combined Arms For Air Defense	SADC, SADC OPS, WEPS
FM 44-18	Air Defense Employment: Stinger	SADC, SADC OPS, WEPS
FM 44-18-1	Stinger Team Operations	SADC, SADC OPS, WEPS
FM 44-44	Avenger Platoon, Section, And Squad Operations	SADC, SADC OPS, WEPS
FM 44-85	Patriot Battalion and Battery Operations	SADC, SADC OPS, WEPS
FM 44-94	Army Air and Missile Defense Command Operations	SADC, SADC OPS, WEPS
FM 44-100	US Army Air And Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-12	Army Theater Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-103	Army Airspace Command and Control in a Combat Zone	SADC, SADC OPS, CMD, TRAF

220. LIVE/SIMULATOR EVENT TRAINING: TACTICAL AIR DEFENSE CONTROLLER

1. Core Skill Introduction Phase

STAGE	EVENTS	HOURS	PERCENT
TADCC MCCES			60.00%

2. Core Skill Basic Phase

STAGE	EVENTS	HOURS	PERCENT
GROUND BASED AIR DEFENSE TRAINING	4	22	5.00%
AIR INTERCEPT CONTROLLER TRAINING	11	37	10.00%
TOTALS:	15	59	15.00%

3. Core Skill Advanced Phase

STAGE	EVENTS	HOURS	PERCENT
SENIOR TRAFFIC DIRECTOR TRAINING	4	32	6.00%
SURVEILLANCE IDENTIFICATION DIRECTOR TRAINING	13	104	8.00%
SENIOR WEAPONS DIRECTOR TRAINING	4	40	6.00%
TOTALS:	21	176	20.00%

4. Core Plus Phase

STAGE	EVENTS	HOURS	PERCENT
SENIOR AIR DIRECTOR TRAINING	8	96	5.00%
TOTALS:	8	96	5.00%

5. Instructor Phase

STAGE	EVENTS	HOURS	PERCENT
INSTRUCTOR TRAINING	2	10	0.00%
AIR INTERCEPT CONTROL INSTRUCTOR TRAINING	3	28	0.00%
TOTALS:	5	38	0.00%
TADC T&R SYLLABUS TOTALS:	49	369	100%

230. LIVE/SIMULATOR EVENT PERFORMANCE REQUIREMENTS

1. General. The majority of the TADC syllabus is ground training that requires in-depth integration within the MACCS. Likewise, development of MAGTF training involving extensive integration with applicable elements of the MAGTF is mandatory in the development of a fully combat qualified TADC.

a. Live Training: Training event condition codes listed as **L** (live), **L/S** (live preferred/simulator optional) in this syllabus designate training to be conducted without the aid of simulator devices. Training not conducted in the live training environment shall be replaced with simulation where applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to the individual, crew and agency training.

b. Simulator Training: Training event condition codes listed as S (simulator), and S/L (simulator preferred/live optional) in this syllabus designate training to be conducted in the Tactical Air Operations Module (TAOM) and the Sector Air Defense Facility (SADF) where applicable. Training not conducted in the TAOM or SADF shall be replaced with live training where applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to the individual, crew, and agency training.

2. Minimum Performance Time for Syllabus "Write-Off"/Designations.

Personnel may receive credit for successful completion of any syllabus requirement/performance standards (except qualifications) upon either a written, oral, or practical demonstration of proficiency, at the Commanding Officer's discretion. Completion of 80 percent of any syllabus event (except qualifications) may be "written-off" as complete at the discretion of the designated evaluator. Qualifications require a completed performance evaluation, and the designation signed by the commanding officer. *Check Guidance In Admin Manual.*

3. Evaluation of Training. Evaluation of those portions of the syllabus that are academic in nature will be conducted by either written/oral examination or a combination of the two means. Operational and system related subjects will be evaluated by practical application means whenever possible. Performance evaluation to qualify for mission qualifications and designations will be conducted per T&R Program Manual and the standardized evaluation forms located in the appendix to this syllabus.

231. COMPONENTS OF A T&R EVENT

1. General. An event contained within a T&R Manual is an individual or collective training standard and contains seven or eight components, dependent on the tier in which they are contained:

1/ SAM-XXX	2/ 0.5	3/ T,C,R, E	4/ E	5/ EQUIP	6/ L/S (NS)
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Goal. The title of a unit of work that needs to be done in the performance of a Marine's duties. It is a clearly stated performance-oriented action requiring learned skills and knowledge, i.e. Engage a rotary winged aircraft.

Requirement. The condition(s) set for the real world or combat circumstances in which the tasks are to be performed. They indicate what is provided (equipment, tools, materials, manuals, aids, etc.), environmental constraints or conditions under which the task is performed, and any specific cues or indicators to which the performer must respond. When resources or safety requirements limit the conditions, this should be stated.

Performance Standard. The performance standard indicates the basis for judging the effectiveness of the performance. It consists of a carefully worded statement that identifies the proficiency level expected when the goal is performed. It is not guidance; it is the standard that will be performed prior to completion. Performance standards are specified in terms of

accuracy, speed, sequencing, quality of performance, adherence to procedural guidelines, etc.

Prerequisite. Provides a listing of academic training or other T&R events that must be completed prior to satisfying the task.

External Syllabus Support. A listing or description of the external support requirements that may be required to satisfy completion of the task. May include range requirements, support aircraft, targets, training devices, or other personnel and equipment.

- NOTES
- 1/ Events are coded per chapter 7 of T&R Manual, Administrative.
 - 2/ Projected event duration is furnished as a planning tool.
 - 3/ Denotes applicable (Basic) Program of Instruction.
 - 4/ An **"E"** indicates an Evaluated event.
 - 5/ Equipment or activity subcategory is listed.
 - 6/ Condition Codes: **L** = live Training; **S** = simulator training; **L/S** = live preferred/simulator optional; **S/L** = simulator preferred/live optional; **N** = Night; **NS** = Night Vision Device; Where contained within () denotes optional conditions.

232. CORE SKILL INTRODUCTION TRAINING. Core Skill Introduction training (100 level) is conducted during the TADC Course at MCCES, 29 Palms, CA.

1. System Training

a. Purpose. To refine the TADC skills required for trouble shooting and maintaining the TAOM system and to provide a means for the TADC to remain current.

b. General

(1) Administrative Notes. Core Skill Introduction training must be completed prior to beginning the Core Skill Basic phase. The POI number for the Core Skill Introduction training syllabus is N0972N1, and for the reserve Mobile Training Team (MTT) it is N0972MN.

(2) Prerequisite. Grade of 2nd Lieutenant through Captain, normal color vision, and a secret clearance.

(3) Refresher Training. Refresher training is not used in the 100 level syllabus.

c. Crew Requirements. None.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (2 Events, 95.5 Hours)

SYS 100 4.0 E TAOC L

Goal. Perform system level functions.

Requirement. Given an operational TAOM. Refer to annex C of the Air Defense Training Section POI Course ID M0972N1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Build a simulated exercise.
- (2) Successfully complete 80% of the above listed standard.

Prerequisite. None.

External Syllabus Support. None.

AIC 101 91.5 E TAOC L

Goal. Introduce AIC functions.

Requirement. Given an operational TAOM. Refer to annex C of the Air Defense Training Section POI Course ID M0972N1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Control an air-to-air intercept.
- (2) Identify essential elements of the Rules of Engagement (ROE).
- (3) Conduct weapons brief.
- (4) Complete weapons reports.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

233. CORE SKILL BASIC TRAINING

1. All 200 and 300 level training can run concurrently in accordance with the TADC Progression Model with the exception of SWD.
2. The TADC must complete Missile Controller (MC) training within the first year of assignment to a Marine Air Control Squadron (MACS).
3. The TADC must be designated a Weapons Controller (WC) by the end of year two after assignment to a MACS.
4. Ground Based Air Defense (GBAD) Training.

a. Purpose. To refine TADC skills required to be qualified as a MC and to provide a means for the TADC to remain current.

b. General(1) Administrative Notes

(a) Successful completion of the MC and AIC events are required for designation as a WC.

(b) Core Skill Basic and Core Skill Advanced training can be conducted concurrently. However, the TADC's focus remains on the completion of the Core Skill Basic phase.

(c) For evaluation purposes, a mission will consist of a brief execution and debrief of each event.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Basic TADC has been absent from a TADC billet for 16 months or longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (4 Events, 22.0 Hours)

GBAD-200	2.0	TAOC	L/S
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Goal. Perform MC functions.

Requirement. Without data link, in a field/garrison environment, coordinate C2 with a GBAD CP.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct manual crosstell to the simulated/live FU.
- (2) Conduct manual assignments against an air threat.
- (3) Disseminate appropriate Weapons Control Status (WCS), Air Defense Warning Condition (ADWC), and States of Alert (SOA).
- (4) Post FU status.
- (5) Know the TAOC TMD capabilities and limitations and interface with joint services.
- (6) Ensure related DB entries are entered and correct.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-7, T-22, T-24, T-32, T-33, T-41, T-67, T-68, T-78, T-80, T-81, T-82, T-84, T-85, T-86.

External Syllabus Support. SAM FU if live.

GBAD-201	4.0	R	TAOC	L/S
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Goal. Perform MC functions.

Requirement. During an exercise, with data link established, utilize GBAD units in a medium/high intensity air defense environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the MC portion of the TAOC crew brief per the TAOC Pocket Checklist.
- (2) Ensure related DB entries are entered and correct.
- (3) Maintain an accurate/critical information flow to the FU via the net(s).
- (4) Complete assignments against an air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC, and SOA to the FU.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) GBAD-200.
- (2) Academics: T-23, T-31, T-71.

External Syllabus Support. SAM units, if live.

GBAD-202	8.0	E	TAOC	L/S
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Goal. Perform MC functions.

Requirement. During an exercise while employing an Integrated Air Defense System (IADS); utilizing multiple SAM units in a centralized mode of control (with data links established); and in a medium/high intensity air defense environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the MC portion of the TAOC crew brief per the TAOC Pocket Checklist.
- (2) Ensure all related DB entries are entered and correct.
- (3) Maintain information flow to the FU via the appropriate net.
- (4) Conduct simultaneous assignments between two FUs against a credible air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC, and SOA to the FUs.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. GBAD-201.

External Syllabus Support. SAM FU(s), CAP and aggressor aircraft.

GBAD-203	8.0	E	TAOC	L/S
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Goal. Qualify as MC.

Requirement. During an exercise, while employing an IADS, utilizing multiple SAM units in a centralized mode of control (with data links established), and in a medium/high intensity air defense environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the MC portion of the TAOC crew brief per the TAOC Pocket Checklist.
- (2) Ensure all related DB entries are entered and correct.
- (3) Maintain information flow to the FU via the appropriate net.
- (4) Conduct simultaneous assignments between two FUs against a credible air threat.
- (5) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (6) Disseminate appropriate WCS, ADWC, and SOA to the FUs.
- (7) Perform appropriate OS functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. GBAD-202.

External Syllabus Support. SAM FU(s), CAP and aggressor aircraft.

5. Air Intercept Controller (AIC) Training.

a. Purpose. To refine TADC skills required to be qualified as an AIC and to provide a means for the TADC to remain current.

b. General

(1) Administrative Notes

(a) Successful completion of the AIC and MC events is required for designation as a Weapons Controller.

(b) Core Skill Basic and Core Skill Advanced training can be conducted concurrently. However, the TADC's focus remains on the completion of the Core Skill Basic phase.

(c) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(d) The AIC will become proficient in controlling simulated and live fighter aircraft employing section and division tactics.

(e) The AIC will become proficient in controlling during live and simulated integrated air defense exercises with multiple fighters.

(f) Briefing and debriefing standards will be per squadron SOP (developed using TOPGUN and F/A-18 TACMAN standards) to include flight safety and emergency procedures prior to executing any event.

(g) Two-way Link 4A and/or Link 16 will be used to the fullest extent possible for each event controlled.

(h) Missions will be executed per ROE established by published AAW directives, operational planning orders/documents, or individual mission briefs.

(i) TACTS facilities should be used when available for debriefing purposes.

(j) All AIC events should be performed in the OM during initial qualification.

(k) Run and hour credit will be given for control from non-OM facilities.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Basic TADC has been absent from a TADC billet for 16 months or longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (11 Events, 39.0 Hours)

AIC-210	0.5	R	TAOC	S
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Goal. Take appropriate action for an aircraft emergency.

Requirement. During a simulated emergency (controlled & uncontrolled). Refer to TAOC PCL and squadron SOP concerning emergencies.

Performance Standards. Successfully complete squadron SOP checklist for aircraft emergency using proper switch actions and AWC utilization.

- (1) Determine nature of emergency.
- (2) Establish "knock it off" as appropriate.
- (3) Notify proper agencies.
- (4) Direct On-Scene Commander squawk emergency as appropriate.
- (5) Establish "emergency fix" using proper switch actions, as appropriate.

Prerequisite. Academics T-17.

External Syllabus Support. None.

AIC-211	1.5	R	TAOC	S
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Goal. Control a simulated section of fighter aircraft.

Requirement. Control against a multiple threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Correctly identify the below threat formations and tactics:
 - (a) Formations:
 - VIC.
 - Champagne.
 - Ladder.
 - Wall.
 - Box
 - Stack
 - Echelon
 - (b) Tactics per AFTTP 3-1.
- (2) Utilization of an AWC.
- (3) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-3, T-9, T-12, T-13, T-19, T-26, T-41, T-68, T-70, T-71, T-76, T-78, T-80, T-81, T-82, T-83, T-85, T-86.

External Syllabus Support. None.

AIC-212	1.5	R	TAOC	S
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Goal. Control a simulated section of fighter aircraft.

Requirement. Against an unknown threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Provide threat information using core information/comm format as briefed.
- (2) Provide Broadcast control transitioning to tactical control after the commit or as briefed.
- (3) Utilize briefed GCI procedures until training goals are met.
- (4) Initiate and employ Link-4A or Link-16 as briefed.
- (5) Utilize an AWC.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) AIC-211.
- (2) Academics: T-55, T-56, T-84.

External Syllabus Support. None.

AIC-213	1.5	R	TAOC	S
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Goal. Control a simulated division of fighter aircraft.

Requirement. Against an unknown threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Provide threat information using core information/comm format as briefed.
- (2) Provide Broadcast control transitioning to Tactical control after the commit.
- (3) Utilize briefed GCI procedures until training goals have been met or as briefed.
- (4) Initiate and employ Link-4A or Link-16 as briefed.
- (5) Utilize an AWC.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-212.

External Syllabus Support. None.

AIC-214	4.0	E	TAOC	S
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Goal. Perform as AIC.

Requirement. During a SIMEX.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC DB entries are correct.
- (2) Initiate and employ Link 4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate current threat status via WCS, ADWC and SOA to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch functions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-213.

External Syllabus Support. None.

AIC-215	2.0	T R	TAOC	L
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Goal. Perform AIC functions from the TAOC radarscope.

Requirement. During a live event, control a section/division from the TPS-59 or TPS-63 radar console.

Performance Standards. Demonstrate proficiency in the following:

- (1) Setup proper UHF and ICS communications.
- (2) Setup the radar console.
- (3) Utilize briefed GCI procedures.
- (4) Utilize external communications.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-213

External Syllabus Support. Fighter and aggressor aircraft.

AIC-216	12.0		TAOC	<u>L</u>
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Goal. Control a section/division of fighter aircraft.

Requirement. During a Defensive Counter Air (DCA) mission (Point, Area Defense, HVAA Protection) against an unknown threat.

Performance Standards. Demonstrate proficiency in the following areas on three separate missions with a minimum of 1 division mission:

- (1) Utilize GCI procedures as briefed or as the tactical situation dictates.
- (2) Utilize an AWC.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-213

External Syllabus Support. Fighter and aggressor aircraft.

AIC-217	4.0	T, R	TAOC	<u>L</u>
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Goal. Control a section/division of fighter aircraft.

Requirement. During an Offensive Counter Air (OCA) mission (Strike Escort, Screen, Sweep) against an unknown threat.

Performance Standards. Demonstrate proficiency in the following areas, on three separate missions with a minimum of one division mission:

- (1) Utilize GCI procedures as briefed or as the tactical situation dictates.
- (2) Utilize an AWC.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-213.

External Syllabus Support. Fighter and aggressor aircraft.

AIC-218	4.0		TAOC	<u>L</u>
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Goal. Control a section/division of fighter aircraft.

Requirement. During a Self Escort Strike mission against an unknown threat.

Performance Standards. Demonstrate proficiency in the following areas on three separate missions with a minimum of one division mission:

- (1) Provide tactical control when requested or when the threat dictates.
- (2) Provide threat information using core information/comm format as briefed.
- (3) Utilize an AWC.

(4) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-213.

External Syllabus Support. Fighter and aggressor aircraft.

AIC-219	4.0	E	TAOC	L
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Goal. Perform as AIC.

Requirement. During a mission, or in an exercise, control at least one division under the supervision of an AICI.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC related DB entries are entered and correct.
- (2) Initiate and employ Link-4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures to control CAP aircraft using Broadcast/Tactical control methods.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate current threat status and appropriate WCS, ADWC, and SOA to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch actions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-210, AIC-211, AIC-212, AIC-213.

External Syllabus Support. Fighter and aggressor aircraft.

AIC-220	4.0	E	TAOC	L
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Goal. Qualify as AIC.

Requirement. During a mission, or in an exercise, control at least one division under the supervision of an AICI.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure all AIC related DB entries are entered and correct.
- (2) Initiate and employ Link-4A or Link-16 as briefed.
- (3) Utilize briefed GCI procedures to control CAP aircraft using Broadcast/Tactical control methods.
- (4) Ensure effective cross-boundary coordination between engagement zones per SWD direction.
- (5) Disseminate current threat status and appropriate WCS, ADWC, and SOA to the fighters.
- (6) Utilize an AWC.
- (7) Perform appropriate switch actions.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-214.

External Syllabus Support. Fighter and aggressor aircraft.

234. CORE SKILL ADVANCED TRAINING

1. All 200 and 300 level training can run concurrently per the TADC Progression Model with the exception of SWD.
2. The TADC must complete both STD and SID by the end of year three after assignment to a MACS.
3. The TADC must have designations as STD, SID and WC prior to designation as an SWD.

4. Senior Traffic Director (STD) Training

a. Purpose. To refine TADC skills required for STD designation and to provide a means for a designated STD to remain current.

b. General(1) Administrative Notes

(a) Perform all functions for STD qualifications.

(b) At least one live and one simulated STD performance event will be conducted during an exercise.

(c) The Core Skill Advanced phase can be conducted concurrent with the Core Skill Basic phase.

(2) Refresher Training. Refresher training is required once a Core Skill Advanced TADC has been absent from a TADC billet for 16 months or longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the higher-level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (5 Events, 36.0 Hours)

STD-300	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Traffic Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following considerations associated with planning an exercise:

- (1) Recommend Airspace Control Measures (ACM) to be used within the TAOC Area of Operations (AO).
- (2) Determine and develop procedures for radar, data link and procedural handovers.

- (3) Conduct coordination with subordinate, adjacent and higher units for implementation of handover procedures and ACM.
- (4) Be familiar with the published ACM found in the Airspace Control Order (ACO), Airspace Control Plan (ACP), and OPORD in order to determine the impact of site selection to mission accomplishment.
- (5) Conduct a detailed threat analysis.
- (6) Identify the Traffic Section communications requirements and assignments.
- (7) Establish procedures for Marine sector air operations, aerial refueling (AR) operations, and HVAA protection.
- (8) Identify TATC responsibilities.
- (9) Coordinate procedures for receiving and modifying the ATO.
- (10) Identify all Traffic DB requirements.
- (11) Prepare the Traffic Section crew brief per TAOC PCL and MCCRES standards.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-05, T-08, T-13, T-17, T-20, T-28, T-29, T-55, T-56, T-57, T-63, T-72, T-73, T-74.

External Syllabus Support. Required planning documents.

STD-301	8.0	R	TAOC	S/L
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Goal. Perform as STD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Effectively manage the Traffic Section per SAD direction.
- (2) Supervise all traffic DB entries.
- (3) Ensure effective employment and adherence to published ACMs and RIO procedures.
- (4) Establish Link 4A or Link-16 as briefed.
- (5) Manage the control of AR operations.
- (6) Coordinate SAR/TRAP missions in the assigned sector.
- (7) Ensure adherence to established Traffic Section emergency procedures.
- (8) Conduct handovers with the Weapons Section and external agencies.
- (9) Perform appropriate VFS/OS functions associated with traffic.
- (10) Assist the Surveillance Section in the identification of friendly aircraft in the assigned sector.
- (11) Compile and forward applicable reports.
- (12) Successfully complete 80% of the above listed standards.

Prerequisite. STD-300.

External Syllabus Support. None.

STD-302	8.0	E	TAOC	L
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Goal. Perform as STD.

Requirement. During a live exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in STD-301.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. STD-301.

External Syllabus Support. External C3 agencies and tactical/ support aircraft.

STD-303	8.0	T, R, E	TAOC	L
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Goal. Designate as STD.

Requirement. During a live exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in STD-301.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. STD-302.

External Syllabus Support. External C3 agencies, tactical/ support aircraft.

3. Surveillance Identification Director (SID) Training

a. Purpose. To refine TADC skills required for SID qualification to provide a means for a designated SID to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions for SID qualifications.

(b) At least one live and one simulated SID performance event will be conducted during an exercise.

(c) The Core Skill Advanced phase can be conducted concurrent with the Core Skill Basic phase.

(d) If previously qualified as a DLC in the 7234 MOS curriculum, the crewmember is not required to perform those events in the 7236 MOS curriculum.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced TADC has been absent from an TADC billet for 16 months or longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the higher level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (14 Events, 104.0 Hours)

SID-310	8.0	E	TAOC	L/S
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Goal. Perform as DLC.

Requirement. In a garrison/field environment, using TAOC equipment, operate a serial link (LINK-11B, ATDL-1, GBDL).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and troubleshoot each link as applicable.
- (3) Perform all order functions associated with the appropriate link.
- (4) Perform link management functions.
- (5) Enter appropriate data filters as listed in OPTASK LINK.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-4, T-7, T-10, T-15, T-23, T-27, T-30, T-31, T-39, T-54, T-60.

External Syllabus Support. External C3 agencies.

SID-311	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, operate a live netted data link (LINK-11A).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and trouble shoot each link as applicable.
- (3) Perform a POFA test.
- (4) Operate in the following modes:
 - (a) Radio Silent (RADSIL).
 - (b) Net Control Station (NCS).
 - (c) Picket.
- (5) Perform link management functions per SID direction.
- (6) Perform data link coordination responsibilities over designated voice nets.
- (7) Enter appropriate data filters as listed in OPTASK LINK.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-53.

External Syllabus Support. JTAO data link platforms.

SID-312	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, operate in a nodeless link environment (Link-16).

Performance Standards. Demonstrate proficiency in the following:

- (1) Achieve fine synchronization in JTIDS/Link 16 network, determine the status of, and troubleshoot the link as appropriate.
- (2) Operate in Radio Silent and Data Silent modes of operation.
- (3) Identify Stacked Net # assignments as per the OPTASKLINK for voice and air control, and ensure they are entered and validated in the DB.
- (4) Establish TAOC as Network Time Reference (NTR).
- (5) Extract information from the slot block allocation sheet in the NDL for entry into the DB.
- (6) Enter the data filters per the OPTASKLINK.
- (7) Load the appropriate time and NDL into the JTIDS terminal from the TAOM and troubleshoot.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-56.

External Syllabus Support. Link-16 capable external C3 agencies.

SID-313	8.0	E	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a garrison/field environment, using TAOC equipment, utilize National Systems Data (NSD).

Performance Standards. Demonstrate proficiency in the following:

- (1) Coordinate use of the Intelligence Broadcast Receiver (IBR) during TAMC operations.
- (2) Coordinate use of the IBR and employ NSD focusing on surface to air threats relevant to the tactical environment.
- (3) Coordinate use of the IBR and employ NSD on its use during down pilot/Trap/CSAR scenarios.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-34.

External Syllabus Support. External C3 agencies and Intelligence Broadcast Services.

SID-314	8.0		TAOC	L/S
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Goal. Prepare/Setup ADCP as a stand-alone system.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Erect ground antenna.
- (2) Ensure workstation and server drives are properly installed.
- (3) Load KGV-8 with crypto fill device.
- (4) Load Network Data Load (NDL).
- (5) Download emplacement data.
- (6) Activate the link.
- (7) Monitor link activity utilizing MITS laptop and troubleshoot the link.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academic T-4.

External Syllabus Support. ADCP and JRE.

SID-315	8.0	TAOC	L/S
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Goal. Prepare/setup ADCP within TAOM configuration.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure Multi-Channel Interface Unit (MCIU) hard drive is properly installed.
- (2) Load KGV-8 with crypto fill device.
- (3) Activate the link.
- (4) Monitor link activity utilizing MITS laptop and troubleshoot the link.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-4.

External Syllabus Support. ADCP and JRE.

SID-316	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Surveillance Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise.

- (1) Identify potential gaps in coverage due to terrain masking and radar horizon limitations; and recommend emplacement/employment of TAOC radars.
- (2) Coordinate with subordinate, adjacent, and higher units for data link architecture and implementation per the OPTASK LINK.
- (3) Extract the ID matrix per published ROE, OPORD, ACP or ACO.
- (4) Conduct a detailed threat analysis.
- (5) Identify the Surveillance Section communications requirements and assignments.
- (6) Recommend EMCON/RTADCN to the TAOC and subordinate agencies' based on OPORD, ACP and ACO direction.

- (7) Identify Surveillance Operator (SO) and DLC responsibilities.
- (8) Plan for the employment of a remote radar.
- (9) Identify Surveillance DB requirements.
- (10) Prepare the Surveillance Section crew brief per TAOC PCL.
- (11) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SID-310 through SID-315.
- (2) Academics: T-16, T-18, T-32, T-65. T-25, T-33, T-46, T-47, T-48, T-63, T-64.

External Syllabus Support. Required planning documents.

SID-317	8.0	TAOC	L
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Goal. Maximize radar performance.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Recommend radar site selection.
- (2) Perform radar alignment.
- (3) Perform radar registration.
- (4) Conduct coordination to optimize performance of selected radars.
- (5) Recommend a radar degradation plan.
- (6) Develop a radar coverage diagram for system radars.
- (7) Conduct remote radar operations.
- (8) Plan for AN/TPS-59 decoy employment.
- (9) Know the capabilities and limitations of all TAOC radars.
- (10) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-37, T-40, T-43.

External Syllabus Support. None.

SID-318	12.0	E	TAOC	S/L
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Goal. Plan for emplacement and employment of a TMD site.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Evaluate the threat.
- (2) Conduct a site survey.
- (3) Emplace a TMD site.
- (4) Provide reporting connectivity.
- (5) Troubleshoot the following:
 - ADCP
 - Radios
 - PPDL
 - Data links
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-4, T-15, T-34, T-67, T-70.

External Syllabus Support. None.

SID-319	4.0		TAOC	L/S
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Goal. Perform EW operations.

Requirement. In garrison/field environment using TAOC equipment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter the TAOC EMCON plan and missile thresholds in the DB.
- (2) Detect, identify and report any jamming to the SAD.
- (3) Fix the location of threat jammers with proper symbology (strokes/air tracks).
- (4) React to the EMCON alert and implement the TAOC EMCON plan per SAD direction.
- (5) Coordinate with the radar tech to optimize radar performance in an EW environment.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. SID-316 and SID-317.

SID-320	8.0	R	TAOC	L/S
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Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a detailed crew brief developed per the pertinent air operations information received via the TAOC Operations Brief/MACCS Commander's brief. The brief will be conducted per TAOC PCL and MCCRES standards.
- (2) Supervise surveillance DB entries including EMCON, data links, radar performance, MRRs, and ID corridors.
- (3) Supervise air surveillance of the assigned sector.
- (4) Supervise implementation of the established ID criteria and subsequent classification process.
- (5) Supervise initialization and management of data links.
- (6) Perform detailed casualty procedure planning in order to assume the functions of the TDC or ICO when operating as the alternate TACC.
- (7) Manage the EP/EMCON plan for the TAOC and subordinate agencies.
- (8) Perform appropriate VFS/OS functions associated with surveillance.
- (9) Implement published manual crosstell procedures.
- (10) Manage the Surveillance Section per SAD direction.
- (11) Compile and forward applicable reports.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites. SID-316 and SID-317.

External Syllabus Support. External C3 agencies.

SID-321	8.0	E	TAOC	L
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Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-319.
- (2) Conduct surveillance planning and operations with a non-MACCS JTAO platform.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SID-320.

External Syllabus Support. External C3 agencies.

SID-322	8.0	E	TAOC	L
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Goal. Designate as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-319.
- (2) Conduct surveillance planning and operations with a non-MACCS JTAO platform.
- (3) Successfully complete 80% of the above listed requirement.

Prerequisite. SID-321.

External Syllabus Support. External C3 agencies.

3. Senior Weapons Director (SWD) Training

a. Purpose. To refine TADC skills required for qualification and designation as a SWD. Additionally, these events will provide a means for the designated SWD to remain current.

b. General

(1) Administrative Notes

(a) Core Skill Advanced training will consist of planning for and execution of Anti-Air Warfare (AAW) exercise. This phase of training encompasses SWD specific training events.

(b) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(2) Prerequisite. Core Skill Basic phase, SID and STD designations.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced TADC has been absent from a TADC billet for 16 months or

longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. Core competent TAOC crew.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (4 Events, 40.0 Hours)

SWD-330	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Weapons Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise:

- (1) Recommend ACM to be used within the TAOC AO.
- (2) Develop the destruction area within the TAOC assigned air defense sector by ensuring the following:
 - (a) Coordinate with GBAD assets for employment/emplacement and MEZ construction.
 - (b) Coordinate with higher headquarters for CAP employment and FEZ considerations.
- (3) Determine CAP management/control responsibilities and procedures.
- (4) Coordinate with the STD for development of handover procedures and symbol management functions.
- (5) Coordinate with SADF staff for reporting of AAW asset status, strip alert procedures and CAP reconstitution.
- (6) Establish procedures for target assignments.
- (7) Develop alternate/casualty engagement zones based on the threat and friendly AAW systems availability.
- (8) Disseminate TAOC and subordinate agency specific ROE procedures/requirements per published ROE.
- (9) Develop detailed procedures for IADS employment in decentralized and autonomous modes of control.
- (10) Develop procedures for operation in semi-automatic and automatic modes of operation with the TAOM.
- (11) Know TAOC TMD capabilities and interface with joint services.
- (12) Conduct a detailed threat analysis.
- (13) Prepare the Weapons Section brief per the TAOC PCL.
- (14) Identify Weapons Section communications requirements and assignments.
- (15) Identify weapons DB items.
- (16) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-01, T-02, T-06, T-11, T-14, T-20, T-22, T-23, T-24, T-28, T-32, T-34, T-35, T-36, T-41, T-49, T-67, T-68, T-69, T-70, T-71, T-76, T-77, T-78, T-79, T-80, T-81, T-82, T-84, T-86.

	<u>External Syllabus Support.</u> None.			
SWD-331	4.0	R	TAOC	S

Goal. Perform as SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Manage the employment of assigned weapons systems per established ROE.
- (2) Conduct a detailed crew brief developed from per air operation information received via the TAOC operations brief/MACCS commander's brief. The brief will be conducted per TAOC PCL.
- (3) Supervise weapons related DB entries to include WEZs, Weapons Control Boundaries, TAORs and special points.
- (4) Manage the Weapons Section per SAD direction.
- (5) Exercise system capabilities to assist in the ID process and the conduct of overall threat evaluation.
- (6) Maintain status of assigned weapons systems and ensure critical information is relayed to appropriate agencies.
- (7) Maintain SA on WEZ engagements, WCS, ADWC and SOA and make recommended changes.
- (8) Request Strip Launch Alert (SLA) aircraft in a timely manner when the threat dictates.
- (9) Ensure maximum use of data links to minimize voice communications.
- (10) Ensure emergency procedures are fully understood and effectively implemented, as required.
- (11) Compile and forward applicable reports.
- (12) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-330.

External Syllabus Support. None.

SWD-332	16.0	E	TAOC	L
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Goal. Perform as SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SWD-331.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-331.

External Syllabus Support. External C3 agencies and tactical/support aircraft.

SWD-333	12.0	E	TAOC	L
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Goal. Designate as an SWD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SWD-331.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SWD-332.

External Syllabus Support. External C3 agencies and tactical/ support aircraft.

235. CORE PLUS TRAINING

1. Senior Air Director (SAD) Training

a. Purpose. To refine TADC skills required for designation as a SAD and to provide a means for the designated SAD to remain current.

b. General

(1) Administrative Notes. For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(2) Prerequisite. Completion of the Core Skill Advanced phase of training.

(3) Refresher Training. Refresher training is required once a Core Plus TADC has been absent from a TADC billet for 16 months or longer. Upon return to an appropriate billet, the TADC will complete "R" coded events in the 400 level syllabus.

c. Crew Requirements. Core competent TAOC crew.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (8 Events, 96.0 Hours)

SAD-400	8.0	R	TAOC	L
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Goal. Perform system troubleshooting.

Requirement. With a faulted TAOM system.

Performance Standards. Demonstrate proficiency in the following:

- (1) Interpret a list of operator alert OCU and take appropriate action.
- (2) Fault isolate components of the seven major equipment groups of the TAOM to the LRI.
- (3) Reconfigure the system around failed units.
- (4) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) Core Skill Advanced Phase.
- (2) Academics: T-10, T-14, T-38, T-39, T-42, T-50, T-51, T-61.

External Syllabus Support. None.

SAD-401	24.0	R	TAOC	L
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Goal. Perform as SAD.

Requirement. During garrison flight operations.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a crew brief prior to flight/link operations.
- (2) Ensure proper system configuration and DB inputs.
- (3) Echelon in/out the TAOMs and voice/data circuits.
- (4) Direct and manage crew function.
- (5) Ensure records and logs are properly maintained.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-400.

External Syllabus Support. Fighter/aggressor aircraft and/or data link platforms.

SAD-402	8.0	R	TAOC	L/S
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Goal. Conduct tactical planning for the Command Section.

Requirement. In a garrison/field environment with appropriate exercise documentation.

Performance Standards. Demonstrate proficiency in the following:

- (1) Prepare a SAD brief per TAOC PCL.
- (2) Oversee planning of the Traffic, Weapons, and Surveillance sections.
- (3) Develop system configuration plan.
- (4) Plan the emplacement of the TAOC to include radar and EW/C employment.
- (5) Supervise DB construction and entry.
- (6) Coordinate with the SADC in planning overall TAOC employment.
- (7) Supervise the conduct of a detailed threat analysis.
- (8) Develop a crew watch schedule and change over procedures.
- (9) Develop a casualty/degradation plan and detailed restoration priorities plan.
- (10) Ensure communications and power requirements that allow for mission accomplishment, are identified.
- (11) Identify system limitations for input to the ACE Commander.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SAD-401.
- (2) Academics: T-1, T-2, T-4, T-6, T-11, T-16, T-32, T-35, T-36, T-37, T-40, T-41, T-52, T-58, T-59, T-62, T-66, T-87.

External Syllabus Support. None.

SAD-403	16.0	R	TAOC	S
---------	------	---	------	---

Goal. Perform as SAD.

Requirement. With a TAOC only exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a detailed SAD brief per TAOC PCL.
- (2) Supervise system configuration and DB input.
- (3) Supervise and manage the Traffic, Weapons and Surveillance sections.
- (4) Identify systems failures/degradations, trouble shoot and perform fault isolation and take corrective action utilizing the SCC.
- (5) Execute briefed casualty procedures and implement the restoration plan to include system reconfiguration as required.
- (6) Ensure records and logs are properly maintained.
- (7) Ensure the SCC is conducting appropriate system maintenance/management and required interfacing with maintenance personnel.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-402

External Syllabus Support. None.

SAD-404	8.0		TAOC	S
---------	-----	--	------	---

Goal. Perform as SAD.

Requirement. During an integrated exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed in SAD-403.
- (2) Coordinate integration of senior, adjacent, and subordinate agencies and ensuring accurate and timely critical information flow is being conducted.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-403.

External Syllabus Support. External C3 agencies.

SAD-405	8.0	E	TAOC	L
---------	-----	---	------	---

Goal. Perform site emplacement of a TAOC.

Requirement. In garrison/field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Tactical dispersion of the TAOMs.
- (2) Effective use of passive defense measures.
- (3) Ensure proper cabling of the TAOC.
- (4) Echelon in/out of TAOMs and external units as required.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-402.

External Syllabus Support. MHE.

SAD-406	16.0	E	TAOC	L
---------	------	---	------	---

Goal. Perform as SAD.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SAD-400 through SAD-405.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-404.

External Syllabus Support. External C3 agencies and MHE.

SAD-407	8.0	E	TAOC	L
---------	-----	---	------	---

Goal. Designate as SAD.

Requirement. In garrison/field.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SAD-400 through SAD-405.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SAD-406.

External Syllabus Support. External C3 agencies.

240. INSTRUCTOR TRAINING1. Instructor (INST) Designation Training

a. Purpose. To designate the TADC as an INST and AICS.

b. General

(1) Administrative Notes

(a) An TADC will be considered for designation upon completion of all events contained with the three phases of training (academic, performance and evaluation).

(b) A review of the MPR will be conducted by the WTI and a recommendation will be staffed to the commanding officer.

(c) The TADC shall have a designation letter, with any waivers, deferments or endorsements, filed in their MACCS Performance Record.

(2) Prerequisite. The INST will be current in the course of instruction for the given position.

c. Crew Requirements. None.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (2 Events, 10 Hours)

INST-500	6.0	E	TAOC	L
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Goal. Conduct a period of instruction

Requirement. An operational system, classroom facilities and instructor/evaluator.

Performance Standard. Demonstrate the ability to Instruct a TAOC "T" code event

Prerequisite. None.

External Support. None.

INST-501	4.0	E	TAOC	L/S
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Goal. Instruct, monitor, evaluate and debrief a student.

Requirement. An operational TAOC system with radars, aircraft and classroom facilities.

Performance Standards. Demonstrate the ability to:

- (1) Review student training history.
- (2) Develop and document a training plan.

- (3) Conduct a monthly Student Training Review.
- (4) Ensure continuous, objective assessment of student progress during training.
- (5) Provide recommendations on student readiness for qualification.
- (6) Identify areas requiring improved performance.
- (7) Provide information during the training review process, as requested.
- (8) Make decisions on skill enhancement training after receiving input from other instructors and the student.
- (9) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) INST-500.
- (2) Instructor will be current in the course of instruction for the given position.

External Syllabus Support. None.

2. Air Intercept Controller Supervisor (AICS) Training

a. Purpose. To designate the TADC as an AICS.

b. General

(1) Administrative Notes

(a) During the AICS training a qualified/designated AIC will act as the "student" AIC for the AICS under instruction.

(b) For evaluation purposes, a mission will consist of a brief, execution and debrief of each event.

(c) AICS evaluation and certification will be done by AICI.

(2) Prerequisite. AIC-220.

c. Crew Requirements. SAD, SCC, AICI and AIC.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

e. Live and Simulator Event Training (3 Events, 28 Hours)

AICS-510	6.0	E	TAOC	S/L
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Goal. Develop instruction techniques.

Requirement. A simulation capable system and classroom facilities.

Performance Standards. Under instruction of an AICI, demonstrate ability to:

- (1) Conduct a comprehensive brief with an AIC to include:
 - (a) T&R requirements.
 - (b) Mission/targeting game plan and timeline awareness.
 - (c) Previously identified weak areas.
- (2) Conduct a comprehensive debrief to include:
 - (a) Conduct the mission with an emphasis on comm priority.
 - (b) Lessons learned.
 - (c) Establishing AIC goals and training requirements.
- (3) Instruct the AIC on the five phases of an intercept.
- (4) Instruct the AIC on air control communication.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. AIC-220

External Syllabus Support. MAWTS-1 ASP and Tactics Trainer.

AICS-511	6.0	E	TAOC	L
----------	-----	---	------	---

Goal. Instruct section and division tactics.

Requirement. Under instruction of an AICI with an operational TAOC system/radars and aircraft.

Performance Standards. Demonstrate proficiency in the following:

- (1) Instruct the following intercept tactics:
 - (a) Section Tactics
 - (b) Division Tactics
- (2) Instruct intercept control.
- (3) Instruct a student on the five phases of an intercept.
- (4) Instruct air control communication.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. AICS-510.

External Syllabus Support. MAWTS-1 ASP and Tactics Trainer.

AICS-512	16.0	E	TAOC	L
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Goal. Instruct, monitor and debrief an AIC.

Requirement. An operational TAOC system with radars, aircraft, and classroom facilities.

Performance Standards. Under instruction of an AICI, demonstrate proficiency as an instructor:

- (1) Conduct of a comprehensive flight brief with the AIC prior to controlling the mission.
- (2) Monitor the AIC during the mission focusing on evaluating the student's performance for debriefing purposes ensuring safety of flight considerations are adhered to by the AIC.

- (3) Conduct a comprehensive debrief focusing on air control communications and tactical lessons learned.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. AICI-511.

External Syllabus Support. Fighter and aggressor aircraft and the MAWTS-1 ASP and Tactics Trainer.

250. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS TRACKING CODES

1. General

a. A TADC will be considered for designation upon completion of all events contained with the three phases of training (academic, performance, and evaluation).

b. A review of the MPR will be conducted by the squadron WTI and a recommendation will be staffed to the commanding officer.

c. The TADC shall have a designation letter, with any waivers deferments or endorsements, filed in their MACCS Performance Record.

2. Core Skill Basic Qualification Events

DESG-600 0.0

Goal. Designate as STD.

Prerequisite. STD-303

DESG-601 0.0

Goal. Designate as SID.

Prerequisite. SID-322

QUAL-602

Goal. Qualify as MC.

Prerequisite. GBAD-203.

QUAL-603

Goal. Qualify as AIC.

Prerequisite. AIC-220.

DESG-604

Goal. Designate as WC.

Prerequisite. QUAL-602 and QUAL-603.

DESG-605Goal. Designate as SWD.Prerequisite. SWD-333.DESG-606Goal. Designate as SAD.Prerequisite. SAD-407.DESG-620Goal. Designate as INST.Prerequisite. INST-501.DESG-621Goal. Designate as AICS.Prerequisite. AICS-512.DESG-630Goal. Designate as WTI.Prerequisite. Completion of MAWTS-1 WTI course.DESG-631Goal. Designate as JICO.Prerequisite. Completion of JMTS JICO course.DESG-632Goal. Designate as AICI.Prerequisite. Completion of MAWTS-1 MDTC or TOPGUN AIC SFTI course.260. SPECIAL TRAINING REQUIREMENTS

<u>COURSE</u>	<u>ACTIVITY</u>
Marine Division Tact cist Course (MDTC)	MAWTS-1
Weapons and Tactics Instructors (WTI) Course	MAWTS-1
Multi-TADIL Adv Joint Interoperability Course (MAJIC)	JMTS
JTIDS Course	JMTS
Joint Interface Control Officer Course (JICO)	JMTS
JTIDS Network Design & System Management (JNDSM)	JMTS
Strike Fighter Tactics Instructors Course(TOPGUN)	NSAWC

261. EXPENDABLE ORDNANCE REQUIREMENTS. None.

262. PROFICIENCY INTERVALS. Tables 2-13, 2-14, 2-15, and 2-16 contain the proficiency intervals for the Core Skill Basic, Core Skill Advanced, and Core Plus and Instructor phases of training.

Table 2-13.-- TADC Proficiency Interval for the
Core Skill Basic Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
GBAD	200	2	*	1.00					L/S
GBAD	201	4	*	1.00			X		L/S
GBAD	202	8	24	1.00				X	L/S
GBAD	203	8	*	2.00				X	L/S
AIC	210	0.5	*	0.75			X		S
AIC	211	1.5	*	0.75			X		S
AIC	212	1.5	*	0.75			X		S
AIC	213	1.5	*	0.75			X		S
AIC	214	4	*	0.75				X	S
AIC	215	2	*	1.0	X		X		L
AIC	216	12	*	1.0					L
AIC	217	4	*	1.0	X		X		L
AIC	218	4	*	1.0					L
AIC	219	4	24	1.0				X	L
AIC	220	4	*	1.25				X	L

Table 2-14.-- TADC Proficiency Interval for the
Core Skill Advanced Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
STD	300	8	24	1.0			X		L/S
STD	301	8	24	1.0			X		S/L
STD	302	8	*	2.0				X	L
STD	303	8	*	2.0	X		X	X	L
SID	310	8	*	.37				X	L/S
SID	311	8	*	.37				X	L/S
SID	312	8	*	.37				X	L/S
SID	313	8	*	.37				X	L/S
SID	314	8	*	.36					L/S
SID	315	8	*	.36					L/S
SID	316	8	24	.36			X		L/S
SID	317	8	*	.36					L
SID	318	12	*	.36				X	S/L
SID	319	4	*	.36					L/S
SID	320	8	24	.36			X		S/L
SID	321	8	*	2.0				X	L
SID	322	8	*	2.0				X	L
SWD	330	8	24	1.0			X		L/S
SWD	331	4	*	1.0			X		S
SWD	332	16	*	2.0				X	L
SWD	333	12	*	2.0				X	L

Table 2-15.-- TADC Proficiency Interval for the Core Plus Phase of Training.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
SAD	400	8		.5			X		L
SAD	401	24	24	.5			X		L
SAD	402	8		.5			X		L/S
SAD	403	16		.5			X		S
SAD	404	8		.5					S
SAD	405	8		.5				X	L
SAD	406	16		1.0				X	L
SAD	407	8		1.0				X	L

Table 2-16. - TADC Proficiency Interval for the Instructor Training Phase.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS& REMARKS
INST	500	6	*	0				X	L
INST	501	4	*	0				X	L
AICI	510	6	*	0				X	L
AICI	511	6	*	0				X	S/L
AICI	512	16	*	0				X	L

263. EVENT UPDATE CHAINING. Table 2-17 contains the event update chaining for the TADC.

Table 2-17.-- TADC Event Update Chaining.

EVENT	EVENTS UPDATED
200	
201	
202	
203	202
210	
211	
212	
213	
214	
215	
216	
217	
218	
219	
220	219

Table 2-17.-- TADC Event Update Chaining.

EVENT	EVENTS UPDATED
300	
301	300
302	300, 301
303	300, 301
310	
311	
312	
313	
314	
315	
316	
317	
318	
319	
320	316
321	316, 320
322	316, 320
330	
331	
332	330
333	330
400	
401	
402	
403	
404	
405	
406	
407	406
500	
501	500
510	
511	
512	

T&R MANUAL, TAOC

CHAPTER 3

AIR CONTROL ELECTRONIC OPERATOR (ACEO) (MOS 7234)

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CHAPTER 3

AIR CONTROL ELECTRONIC OPERATOR (ACEO)

300. INTRODUCTION

1. The purpose of the Marine Aviation Training and Readiness (T&R) program is to provide the commander with standardized programs of instruction for all aviation personnel. The goal is to develop unit warfighting capabilities, not to measure the proficiency of individuals. Syllabi are based on specific performance standards designed to ensure proficiency in core competencies. An effective T&R program is the first step in providing the MAGTF Commander with an Aviation Combat Element (ACE) capable of accomplishing any and all of its stated missions. The T&R program provides the fundamental tools for commanders to build and maintain unit combat readiness. Using these tools, unit training managers can construct and execute an effective training plan which supports the unit's mission essential tasks.

2. Unit training management is the application of the Marine Corps Training Principles and the Systems Approach to Training (SAT) to satisfy the training requirements of commanders at all levels in order to accomplish their wartime mission. Guidance concerning unit training management and the process for establishing effective unit training management programs are contained in MCRP 3-0A, *Unit Training Management Guide*, and form the basis for the development of this manual. Familiarity with MCRP 3-0A will enhance your understanding of the SAT used in T&R development and Marine Corps UTM principles.

3. To maintain congruity in aviation and ground T&R programs, CG TECOM (C4610) is coordinating an update to the aviation unit evaluation mechanism. Efforts are underway to incorporate Collective Training Standards (CTS) into aviation T&R manuals. The goal of this effort is to replace MCCRES Mission Performance Standards (MPS) with T&R CTS and utilize the T&R as the unit evaluation mechanism. Like MPS, CTS are criteria that specify mission and functional area unit proficiency standards for combat, combat support, and combat service support units.

4. The effort to replace MCCRES MPS with T&R CTS is in the development phase. The concept is to create separate unit chapters in all aviation T&R manuals which contain unit CTS in the form of unit events. CTS will be derived and implemented into T&R manuals using existing unit MCCRES MPS as a baseline. Unit evaluation will be standardized in T&R manuals, not in a separate document. CG TECOM (C4610) plans to cancel unit MCCRES orders as respective unit CTS chapters are approved. Until unit T&R CTS are formally approved, MCCRES shall be utilized as the aviation unit evaluation standard.

301. CORE COMPETENCIES/SKILLS

1. Core competency serves as the foundation of the T&R program. Core competencies are those core capabilities and skills that support the

Mission Essential Tasks (METs), derived from FMFM 5-1 and T/O mission statements, which are realistically expected to be assigned in combat.

2. Mission. Detect, identify and control the intercept of hostile aircraft and missiles and to provide air direction and control to friendly aircraft in the accomplishment of support missions.

3. TAOC Mission Essential Tasks

- a. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations (A).
 - Conduct expeditionary operations to include the capability to phase control ashore.
- b. (UJTL TA 2.4) Disseminate Tactical Warning Information and Attack (B).
- c. (UJTL TA 3.2.7) Conduct Air and Missile Defense Operations (C).
 - Conduct air surveillance.
 - Control surface and airborne weapons systems.
 - Conduct theater missile defense weapons systems management.
- d. (UJTL TA 3.2.8) Conduct Air to Air Operations - Control airborne weapons systems (D).
- e. (UJTL TA 3.3) Coordinate Battlespace Maneuver and Integrate with Firepower (E).
 - Conduct combat airspace management.
 - Integrate with MAGTF, joint, and combined airspace command and control systems.
- f. (UJTL TA 5.2.1) Establish, Operate and Maintain Baseline Information Exchange (F).
 - Conduct combat airspace management.
 - Integrate with MAGTF, joint, and combined airspace command and control systems.
- g. (UJTL TA 6.5) Provide for Combat Identification- Conduct air surveillance (G).
- h. (UJTL TA 7.1) Conduct Mission Operations in a CBRNE Environment - Conduct combat operations in an NBC environment (H).

	METs							
CORE SKILLS	A	B	C	D	E	F	G	H
Tactical Air Traffic Control				X	X			X
Combat Identification and Surveillance		X	X	X			X	X
Air Intercept Control			X	X				X
Missile Control			X		X			X
Data Link Coordination		X	X	X			X	X
Air Battle Management	X	X	X	X	X	X	X	

4. TAOC Core Capability. A core capable TAOC is task organized to provide three combat crews to execute the following functions: tactical air traffic control (TATC), combat identification and surveillance, air intercept control, missile control, data link coordination, and air battle management; and is able to sustain 24-hour operations in support of a MEF.

5. EW/C Core Capability. A core capable EW/C augments the TAOC or deploys independently to provide limited TATC, combat identification and surveillance, air intercept control, missile control, and data link coordination; and is able to sustain 24-hour operations.

6. TAOC Detachment Crew Configuration

a. TAOC Crew

- 1 Senior Air Director.
- 1 Senior Weapons Director.
- 2 Air Intercept Controllers.
- 1 Missile Controller.
- 2 Assistant Weapons Controllers.
- 1 Senior Traffic Director.
- 1 Tactical Air Traffic Controller.
- 1 Surveillance Identification Director.
- 2 Surveillance Operators.
- 1 Data Link Coordinator.
- 1 Systems Configuration Coordinator.

b. Sector Air Defense Facility Crew

- 1 Sector Air Defense Commander.
- 1 Sector Air Defense Facility Operations Officer.
- 1 Sector Air Defense Facility Crew Chief.
- 2 Sector Air Defense Facility Operators.
- 1 AD Representative (covered in separate T&R).

- 1 Intelligence Officer (covered in separate T&R).
- 1 Aviation Representative (covered in separate T&R).

7. Core Competency. Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum core skill proficiency and minimum numbers of leaders per paragraphs 7a and 7b below.

a. Minimum Unit Core Skill Requirements. In order to be considered core competent, a unit must possess a minimum number of crewmembers who are competent in each core skill. In order to be considered competent in a core skill, an individual must attain and maintain proficiency in core skill events, as delineated in paragraphs 7a(1) and 7a(2) below.

TAOC (EW/C)			
CORE SKILL	7210/7202	7236	7234
Tactical Air Traffic Control	2(0)	1(1)	3(1)
Combat Identification and Surveillance	1(1)	2(1)	6(3)
Air Intercept Control	2(0)	4(3)	6(3)
Missile Control	1(0)	2(0)	0(0)
Data Link Coordination	0(0)	0(0)	3(3)
Air Battle Management	11(5)	1(1)	0(0)

*Note: Columns 2, 3, 4: first number represents personnel required for a core competent TAOC crew; number in parenthesis represents personnel required for a core competent EW/C crew.

(1) Events Required to Attain Individual Core Skill Competency. To initially attain competency in a core skill, an individual must successfully complete all of the T&R events listed in the chart below for that core skill.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination	Air Battle Management
7210/02 T&R Event Requirements to Attain Competency	STD-214	SID-243	AIC-325	GBAD-303	SID-243	SWD-403 SAD-417 SOPS-422 SADC-432
7236 T&R Event Requirements to Attain Competency	STD-303	SID-322	AIC-225	GBAD-203	SID-322	SWD-333 SAD-407
7234 T&R Event Requirements to Attain Competency	TATC-313	SO-214	AWC-224		DLC-306	SDFO-404 SDFC-411

(2) Events Required to Maintain Individual Core Skill Competency.
To maintain competency in a core skill, an individual must maintain proficiency in all of the core skill events listed in the chart below.

	Tactical Air Traffic Control	Combat Identification and Surveillance	Air Intercept Control	Missile Control	Data Link Coordination
7210/7202 T&R Event Requirements to Maintain Competency	None	SID-227 SID-231	AIC-319	GBAD-302	None
7236 T&R Event Requirements to Maintain Competency	None	SID-316 SID-320	AIC-219	GBAD-202	None
7234 T&R Event Requirements to Maintain Competency	TATC-313	SO-214	None	None	DLC-306

(b) Minimum Flight Leader Requirements. As a minimum, in order to be considered core competent, a unit must possess the following number of crews with the listed leadership designations.

LEADERSHIP DESIGNATION	TAOC(EW/C) TOTAL ('200's)
SADC	3(0)
SADC OPS	3(0)
SAD	3(3)
SWD	3(3)
STD	3(1)
SID	3(2)

302. SUMMARY/INDEX OF LIVE/SIMULATED EVENTS

1. Core Skill Introduction Training. The Core Skill Introduction training summary is contained in the MCCES POI for the TADC.

2. Core Skill Basic Training. Table 3-1 contains a listing of the Core Skill Basic events and associated page numbers.

Table 3-1.-- Core Skill Basic Training Events.

EVENT	GOAL	PAGE
SYS-200	Cable a TAOM System	3-30
SYS-201	Perform TAOM & ECU pallet pickup	3-30
SYS-202	Setup a TAOM for operations	3-30
SYS-203	Operate the TAOM	3-31
SYS-204	Perform system turn up/turn down	3-31
SYS-205	Perform OLM on the TAOM	3-31
SO-210	Conduct Manual Crosstell	3-32
SO-211	Perform as SO	3-33
SO-212	Perform SO functions	3-33
SO-213	Perform SO functions	3-34
SO-214	Qualify as SO	3-34
AWC-220	Assist the AIC	3-35
AWC-221	Assist the AIC	3-36
AWC-222	Assist the AIC	3-36
AWC-223	Assist the AIC	3-36
AWC-224	Qualify as AWC	3-37

3. Core Skill Advanced Training. Table 3-2 contains a listing of the Core Skill Advanced training events and associated page numbers.

Table 3-2.-- Core Skill Advanced Training Events.

EVENT	GOAL	PAGE
DLC-300	Perform DLC functions	3-38
DLC-301	Perform DLC functions	3-38
DLC-302	Perform DLC functions	3-39
DLC-303	Prepare/setup ADCP as a stand alone system	3-39
DLC-304	Prepare/setup ADCP within a TAOM configuration	3-40
DLC-305	Perform as DLC	3-40
DLC-306	Qualify as DLC	3-40
TATC-310	Perform as TATC	3-41
TATC-311	Perform as TATC	3-42
TATC-312	Perform as TATC	3-42
TATC-313	Qualify as TATC	3-43

4. Core Plus Training. Table 3-3 contains a listing of the Core Plus training events and associated page numbers.

Table 3-3.-- Core Plus Training Events.

EVENT	GOAL	PAGE
SDFO-400	Set-up/pack-up the SADF for operations	3-44
SDFO-401	Perform as a plotter within the SADF	3-44
SDFO-402	Operate MAGTF Software Baseline (MSBL) systems	3-44
SDFO-403	Operate TBMCS	3-45
SDFO-404	Designate as SDFO	3-45
SDFC-410	Perform as SDFC	3-46
SDFC-411	Designate as SDFC	3-47
SCC 420	Perform SCC function	3-47
SCC 421	Supervise for TAOM embarkation and system set-up	3-48
SCC-422	Perform as SCC	3-48

Table 3-3.-- Core Plus Training Events--Continued.

EVENT	GOAL	PAGE
SCC-423	Designate as SCC	3-49
SID-430	Conduct tactical planning for the Surveillance Section	3-49
SID-431	Maximize RADAR performance	3-50
SID-432	Plan for emplacement and employment of a TMD site	3-51
SID-433	Perform as SID	3-51
SID-434	Perform as SID	3-52
SID-435	Perform EW operations	3-52
SID-436	Designate as SID	3-52

5. Instructor Training. Table 3-4 contains a listing of the instructor training events and associated page numbers.

Table 3-4.-- Instructor Training Events.

EVENT	GOAL	PAGE
INST-500	Conduct a period of instruction	3-53
INST-501	Instruct, monitor, evaluate and debrief a student	3-54

7. Operator Core Skills. Table 3-5 contains a listing of Core and Core Plus skills that directly support the METL for each unit. Core skills shall be a determining factor in developing T&R training requirements. Special skills and training requirements must receive appropriate prioritization and emphasis based on the training need, and the likelihood of those types of missions being assigned during operations.

Table 3-5.-- Core and Core Plus Skills.

EVENT CODE	METLS							
	A	B	C	D	E	F	G	H
	CORE SKILLS							
SYS-200	X							X
SYS-201	X							X
SYS-202	X							X
SYS-203	X							X
SYS-204	X							X
SYS-205	X							X
SO-210	X	X	X				X	X
SO-211	X	X	X				X	X
SO-212	X	X	X				X	X
SO-213	X	X	X				X	X
SO-214	X	X	X				X	X
AWC-220	X	X	X				X	X
AWC-221	X	X	X				X	X
AWC-222	X	X	X				X	X
AWC-223	X	X	X				X	X
AWC-224	X	X	X				X	X
DLC-300	X	X						X
DLC-301	X	X						X

Table 3-5.-- Core and Core Plus Skills--Continued.

EVENT CODE	METLS							
	A	B	C	D	E	F	G	H
	CORE SKILLS							
DLC-302	X	X						X
DLC-303	X	X						X
DLC-304	X	X						X
DLC-305	X	X						X
DLC-306	X	X						X
TATC-310	X	X	X	X				X
TATC-311	X	X	X	X				X
TATC-312	X	X	X	X				X
TATC-313	X	X	X	X				X
CORE PLUS								
SDFO-400	X							X
SDFO-401	X							X
SDFO-402	X							X
SDFO-403	X							X
SDFO-404	X							X
SDFC-410	X							X
SDFC-411	X							X
SCC-420	X							X
SCC-421	X							X
SCC-422	X							X
SCC-423	X							X
SID-430	X	X	X				X	X
SID-431	X	X	X				X	X
SID-432	X	X	X				X	X
SID-433	X	X	X				X	X
SID-434	X	X	X				X	X
SID-435	X	X	X				X	X
SID-436	X	X	X				X	X

303. UNIT TRAINING POLICIES

1. The unit's training program emphasizes qualifications and overall combat readiness of a unit. Individual training serves as the building block for overall unit readiness. However, unit training will never be compromised for the training of a select, few individuals. Squadron and battalion commanding officers will ensure this training philosophy is implemented. Unit training must predominate and squadrons must tailor training plans to ensure unit combat readiness.

2. The training of Marines to perform as an integral aviation unit in combat lies at the heart of the T&R program. Unit readiness and individual readiness are directly related. Individual training and the mastery of individual core skills serve as the building blocks for unit combat readiness. A Marine's ability to perform those critical skills required in combat is essential.

3. Commanders shall ensure all tactical training is conducted to a MCCRES standard. The MCCRES, as outlined in MCO P3501.1, is the unit training standard, and all syllabus events shall be tailored to meet MCCRES requirements. Commanders at all levels are responsible for effective aviation training. The conduct of training in a professional manner consistent with Marine Corps standards cannot be overemphasized.

4. Commanders must be cognizant of the numerous factors affecting unit training on a daily basis. Factors that all commanders must address include, but are not limited to:

a. Efficiency. Time and resources expended are measurements for training efficiency. Commanders must ensure all training increases combat readiness. Unit personnel shall thoroughly plan and effectively execute training to maximize return on their time and effort.

b. Individual Differences. Commanders must recognize the differences inherent in each individual and should mold flexible training programs to accommodate those differences.

c. Decentralization of Training. The lowest echelon possible shall be responsible for conducting training. Each senior level of command must monitor subordinate commands to ensure safe and efficient training requirements.

5. Commanders shall provide personnel the opportunities to attend formal and operational level courses of instruction as required by this manual. Attendance at all formal courses must enhance the warfighting capabilities of the unit.

6. Risk Management. Operational Risk Management (ORM) is a process to aid commanders in accomplishing their missions while protecting the force. Commanders, leaders, maintainers, planners and schedulers should integrate risk assessment in the decision making process and implement hazard controls to eliminate risk or reduce it to an acceptable level.

7. MACCS Integrated System Training. All elements of the MACCS shall maintain the capability to effectively function as part of an integrated airspace command and control system. In that large exercises may not always offer sufficient training opportunity for all crewmembers, and in many cases do not offer sufficient latitude to refine capability upon arrival, the MACCS should conduct MACCS Integrated System Training Exercises (MISTEX) on a regular basis to qualify units and personnel per their respective T&R syllabus. MISTEXs should focus on the establishment of necessary communications and data links between MACCS agencies, and incorporate sufficient simulation and MSEL items to exercise and analyze system integration, crew coordination and critical information flow wherever possible. Tactical data link capable agencies should conduct frequent "link" training exercises to maintain proficiency.

8. Instructor/Evaluators. Commanders must ensure training is conducted with proper instructor/evaluator support. **All unqualified operators will have a dedicated instructor when performing syllabus training. No more than 50% of any one section of the TAOC crew can be comprised of student operators.**

304. AIR CONTROL ELECTRONICS OPERATOR (ACEO) TRAINING PROGRESSION PHILOSOPHY. The purpose of this syllabus is to develop and refine those skills required for the ACEO to function as a Tactical Air Traffic Controller (TATC), a Data Link Coordinator (DLC), and/or a Sector Air Defense Facility Crew Chief (SADFCC) within a core capable TAOC crew. The progression of the ACEO through the syllabus has been tailored towards that end. It is incumbent upon the squadron commander to ensure that each event is completed in accordance with each performance standard established for that event.

305. ACEO TRAINING PROGRESSION MODEL

1. The ACEO Training Progression Model is depicted in figure 3-1.

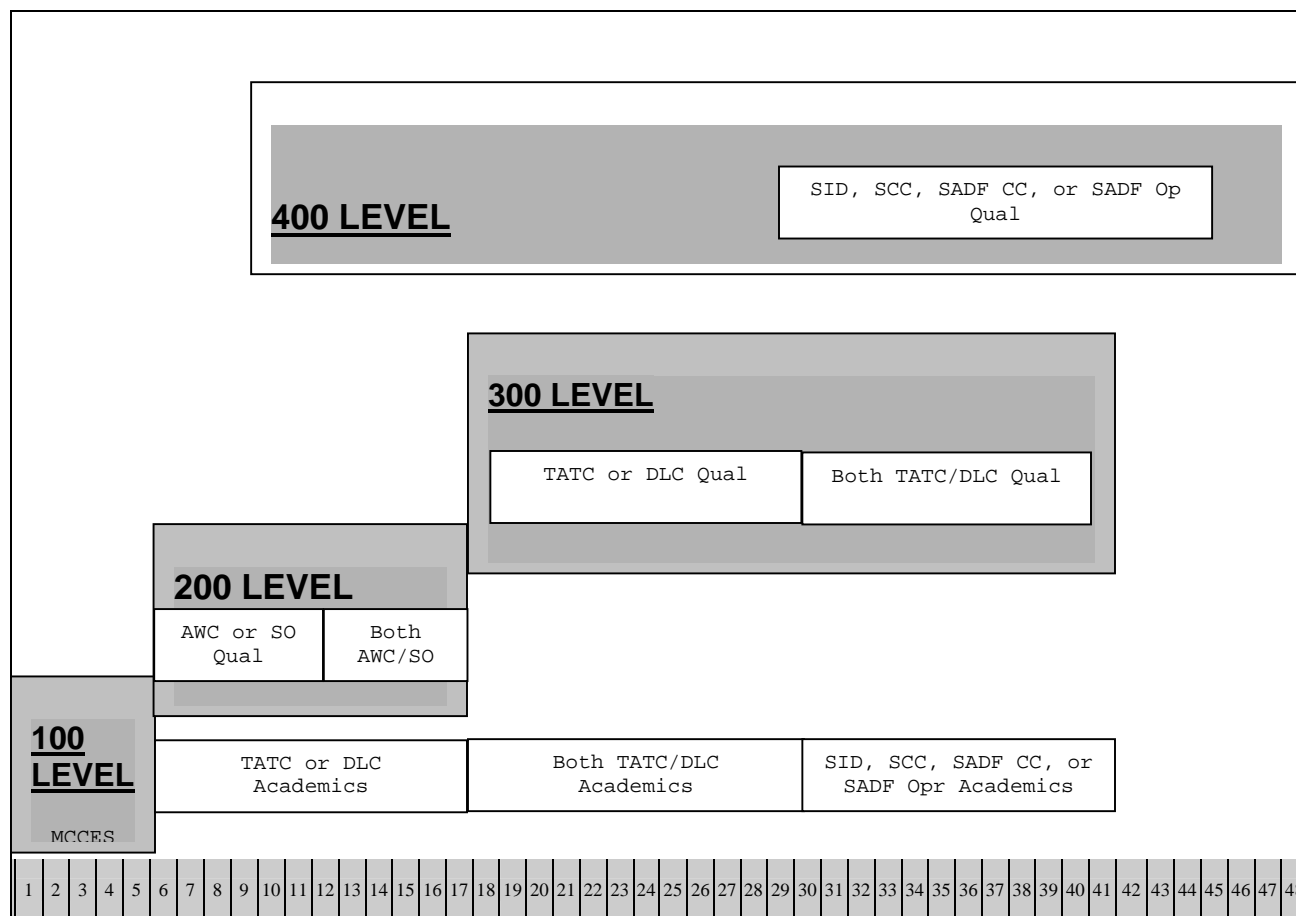


Figure 3-1.-- Air Control Electronics Operator Training Progression Model.

2. This model depicts the **logical progression of qualifications** within a unit. The base of each model contains the initial qualifications an individual receives after completion of the MOS-qualifying school. The highest level of the progression model contains those qualifications held by only the most experienced personnel within a unit.

3. The Core Skill Introduction phase, or 100 level events, is completed at Air Control Electronics Operator Course (ACEOC), MCCES, 29 Palms, CA. Upon completion of ACEOC, the Marine is assigned the 7234 MOS designation.

4. The Core Skill Basic phase, or 200 level events, moves an ACEO from a basic understanding of core skills to proficiency in basic core skills. This phase is normally accomplished during the first year of assignment to an operational unit. Significant training for this stage includes qualifying as a SO and AWC.

a. Surveillance Operator (SO) Designation. The ACEO is SO designated after completing required Core Skill Basic phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Assistant Weapons Controller (AWC) Designation. An ACEO is AWC designated after completing required Core Skill Basic phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

5. The Core Skill Advanced phase, or 300 level events, moves an ACEO from a basic understanding of core skills to proficiency in advanced core skills. This phase is normally accomplished during years two and three of the first assignment to an operational unit. Significant training for this stage includes qualifying as a DLC and TATC.

a. Data Link Coordinator (DLC) Designation. An ACEO is DLC designated after completing required events in the Core Skill Advanced phase of the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Tactical Air Traffic Controller (TATC) Designation. An ACEO is TATC designated after completing required Core Skill Advanced phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

6. The Core Plus phase, or 400 level events, moves an ACEO from a basic understanding of advanced core skills to proficiency in core plus skills. Significant training for this stage includes qualifying as a SADFO, SAD FCC, SCC, and SID. The 400 level qualifications may be achieved once 200 and 300 levels are complete.

a. Sector Air Defense Facility Operator (SADFO) Designation. An ACEO is SADFO designated after completing required Core Plus phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

b. Sector Air Defense Facility Crew Chief (SADFCC) Designation. An ACEO is SADFCC designated after completing required Core Plus phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

c. System Configuration Coordinator (SCC) Designation. An ACEO is SCC designated after completing required Core Plus phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

d. Surveillance Identification Director (SID) Designation. An ACEO is SID designated after completing required Core Plus phase events in the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

7. The unit's training progression model provides training officers with a valuable tool to develop training plans. With a clear progression model and an emphasis on qualifying personnel in Core Skill Introduction and Core Skill Basic phases, training officers have the ability to produce viable training plans. Units will use the model as a point of departure to generate weekly, monthly, quarterly and annual training plans.

306. Programs of Instruction (POI) for the ACEO

1. Basic ACEO

<u>WEEKS</u>	<u>COURSE</u>	<u>ACTIVITY</u>
13	AIR CONTROL ELECTRONICS OPERATORS COURSE (ACEOC)	MCCES

2. ACEO refresher training will be accomplished at the MACSSs.

307. INSTRUCTOR DESIGNATIONS

1. Instructor (INST) Designation. An ACEO is INST designated after completing the required events of the appropriate T&R syllabus. The ACEO shall be evaluated by a TAOC SAD and designated by the commanding officer or his representative. A designation letter shall be entered in the crewmember's MACCS Performance Record.

310. GROUND/ACADEMIC TRAINING

1. Academic training will be conducted for each phase/stage of the syllabus. Commanders will incorporate the lectures in table 3-6 into the training plans. Where indicated, standardized academic training materials exist and may be obtained from the activity listed as the sponsor.

Table 3-6.-- MACCS Academic Course of Instruction.

LECTURE CODE	LECTURE TITLE	SPONSOR
	200 LEVEL: CORE SKILL BASIC	
A-01	MAGTF Organization	MCCES
A-02	MACCS Organization	MCCES
A-03	The Six Functions of Marine Aviation	MAWTS-1 ASP
A-04	- Control of Aircraft & Missiles	MAWTS-1 ASP
A-05	- Offensive Air Support	MAWTS-1 ASP
A-06	- Assault Support	MAWTS-1 ASP
A-07	- Electronic Warfare	MAWTS-1 ASP
A-08	- Aerial Reconnaissance	MAWTS-1 ASP
A-09	- Anti-Air Warfare	MAWTS-1 ASP
A-09	Air Tasking Order/Special Instructions	MCCES
A-10	MACCS Training Management	MCCES
A-11	MACCS Reference Material	MCCES
A-12	Local AOR Contingencies & OP PLANS	Local MACG
A-13	ROE Overview	MAWTS-1 ASP
A-14	MACCS Communications	MAWTS-1 ASP
A-15	TBMCS Overview	MAWTS-1 ASP
A-16	Data Link Symbolology	MCCES
A-17	Manual Crosstell Procedures	MCCES
A-18	Encryption & Authentication Procedures	MCCES
A-19	COMSEC & Crypto handling	MCCES
	300 LEVEL: CORE SKILL ADVANCED	
B-01	ASM/SSM Threat	MAWTS-1 ASP
B-02	Fixed Wing Threat	MAWTS-1 ASP
B-03	Rotary Wing Threat	MAWTS-1 ASP
B-04	REC Threat	MAWTS-1 ASP
B-05	Ground Threat	MAWTS-1 ASP
B-06	AOR Specific Threat & OPLANS	Local MACG
B-07	TACC	MAWTS-1 ASP
B-08	TAOC	MAWTS-1 ASP
B-09	DASC	MAWTS-1 ASP
B-10	ATC Detachment	MAWTS-1 ASP
B-11	MAGTF GBAD	MAWTS-1 ASP
B-12	MWCS	MAWTS-1 ASP
B-14	AEW	MAWTS-1 ASP
B-15	MACCS/Joint Data link	MAWTS-1 ASP
B-16	USMC Aviation Ordnance	MCCES
B-17	Phasing Control Ashore	MAWTS-1 ASP
B-18	Airspace Planning/Management (Combat Airspace)	MAWTS-1 ASP
B-19	Tanker Management	MAWTS-1 ASP
B-20	Armed Reconnaissance	MAWTS-1 ASP
B-21	UAV Programs & Integration	MAWTS-1 WTI *
B-22	Link Architecture & Procedures	MAWTS-1 WTI *

Table 3-6.-- MACCS Academic Course of Instruction--Continued.

LECTURE CODE	LECTURE TITLE	SPONSOR
	400 LEVEL: CORE PLUS	
B-23	CSAR/TRAP	MAWTS-1 ASP
B-24	NEO Execution	MAWTS-1 ASP
B-25	Execution Checklist	MAWTS-1 WTI *
C-01	Integrated Combat Airspace Command & Control (ICAC ²)	MAWTS-1 ASP
C-02	Joint Air Operations	MAWTS-1 ASP
C-03	Theater Missile Defense	MAWTS-1 WTI *
C-04	MACCS in support of Special Operations	MAWTS-1 WTI *
C-05	ROE Development	MAWTS-1 WTI *
C-06	SIS Aircraft	MAWTS-1 ASP
C-07	JTAO Procedures	MCCES

(*) Lecture codes are standardized throughout all MACCS related syllabi. They link the ATRIMS to specific T&R events within syllabi. Lecture codes may not be listed sequentially.

2. Academic training listed in table 3-7 is required for personnel assigned to the TAOC.

Table 3-7.-- TAOC Academic Syllabus.

CODE	CLASS TITLE
T-01	AAW ANTI-AIR WARFARE DOCTRINE
T-02	ADC RESPONSIBILITIES
T-03	AI CONTROL/ TACTICAL TERMINOLOGY
T-04	AIR DEFENSE COMMUNICATIONS PLATFORM
T-05	AIRSPACE MANAGEMENT
T-06	ATACC REQUIREMENTS
T-07	ATDL-1
T-08	ATO'S AND FRAG'S
T-09	BRIEFING & DEBRIEFING FOR THE AIC
T-10	C&M PANEL
T-11	C4I SYSTEMS
T-12	CAP MANAGEMENT
T-13	COMMUNICATIONS BREVITY
T-14	CREW COORDINATION
T-15	DATA LINK TROUBLESHOOTING
T-16	EMCON PLANNING AND IMPLEMENTATION
T-17	EMERGENCY PROCEDURES
T-18	EP CAPABILITIES
T-19	FIGHTER MISSIONS
T-20	FIRE SUPPORT COORDINATIN MEASURES
T-21	FLIGHT SUPERVISORS BRIEFING & DEBRIEFING PROCEDURES
T-22	GBAD VOICE CONTROL PROCEDURES
T-23	GBDL
T-24	IADS EMPLOYMENT
T-25	IDENTIFICATION PROCEDURES

Table 3-7.-- TAOC Academic Syllabus--Continued.

CODE	CLASS TITLE
T-26	INTERCEPT CONTROL
T-27	INTERFACE COORDINATION
T-28	JOINT CLOSE AIR SUPPORT
T-29	JRCC OPERATIONS
T-30	JTAO DATA LINK OPERATIONS
T-31	LINK OPS MESSAGES
T-32	MACCS INFORMATION FLOW
T-33	MANUAL CROSSTELL
T-34	NATIONAL SYSTEMS DATA
T-35	OPSPLANS AND OPORDERS
T-36	PHASE CONTROL
T-37	RADAR EMPLOYMENT & PERFORMANCE
T-38	RADIO SETUP
T-39	RADIO SETUP, REPP/SEPP
T-40	REMOTE RADAR
T-41	RULES OF ENGAGEMENT
T-42	SCC RESPONSIBILITIES
T-43	SENSOR REGISTRATION
T-44	SIM SCENARIO EXECUTION
T-45	SIM SCENARIO GENERATION
T-46	SURVEILLANCE BRIEF
T-47	SURVEILLANCE COMMUNICATIONS
T-48	SURVEILLANCE SECTION RESPONSIBILITIES
T-49	SWD COORDINATION REQUIREMENTS
T-50	SYSTEM ECHELON
T-51	SYSTEM TROUBLESHOOTING
T-52	T&R PROGRAM
T-53	TADIL A
T-54	TADIL B/NATO LINK 1
T-55	TADIL C
T-56	TADIL J
T-57	TANKER MANAGEMENT
T-58	TAOC COMMUNICATIONS
T-59	TAOC CREW BRIEF
T-60	TAOC DATLINK CAPABILITIES
T-61	TAOC EMPLOYMENT & POWER REQUIRMENTS
T-62	TAOC REPORTS & FORMATS
T-63	TBMCS
T-64	TDC RESPONSIBILITIES
T-65	TDS PLATFORMS

Table 3-7.-- TAOC Academic Syllabus--Continued.

CODE	CLASS TITLE
T-66	THEATER AIR GROUND SYSTEMS
T-67	THEATER MISSILE DEFENSE
T-68	THREAT AIRCRAFT
T-69	THREAT GROUND AND NAVAL FORCES
T-70	THREAT MISSILES
T-71	THREAT TACTICS
T-72	TRAFFIC BRIEF
T-73	TRAFFIC COMMUNICATIONS
T-74	TRAFFIC SECTION RESPONSIBILITIES
T-75	TRAP TACTICAL RECOVERY OF AIRCRAFT AND PERSONELL
T-76	US/ALLIED AIRCRAFT
T-77	US/ALLIED GROUND AND NAVAL FORCES
T-78	US/ALLIED MISSILES
T-79	WEAPONEERING
T-80	WEAPONS AIRSPACE MANANGEMENT
T-81	WEAPONS BRIEF
T-82	WEAPONS COMMUNICATIONS
T-83	WEAPONS CONTROL FROM TAOC RADARS
T-84	WEAPONS DATA LINK ORDERS
T-85	WEAPONS MODES OF OPERATIONS
T-86	WEAPONS SECTION RESPONSIBILITIES
T-87	WEATHER

3. External academic courses of instruction available to complete the syllabus are listed below.

<u>COURSE</u>	<u>ACTIVITY</u>
Multi-TADIL Advanced Joint Interoperability Course	JMTS
JTIDS Course	JMTS
AOC-IQT Plans/Ops Technician Training	C2WS
Marine Division Tactics Course (MTDC)	MAWTS-1

4. The academic syllabus sponsor will conduct an annual academic syllabus review.

311. TRAINING REFERENCES

1. The training references in tables 3-8 through 3-12 shall be utilized to ensure safe and standardized training procedures, performance steps, grading criteria and equipment operation.

Table 3-8.-- Combined/Joint/Joint-Related Publications.

PUBLICATION	TITLE	SECTION
ACP-125	Allied Communication Publication	SADF, CMD
CJCSI 3121.01A	Standing Rules of Engagement for US Forces	SADC, SADFOPSO, SAD, WEPS
CJCSI 3320.03	Joint Communications Electronics Operation Instructions	SADF, CMD
CJCSI 6232.01A	Deconflicting JTIDS/MIDS Operations	SURV
CJCSI 6240.01A	Training Responsibilities for the Joint Tactical Air Operations Interface Program	CMD, INTSR
CJCSM 3115.01	Joint Data Network (JDN) Operations	SURV, SCC
CJCSM 6120.01A	Joint Multi-Tactical Digital Information Link (TADIL) Operating Procedures	SURV, SCC
CJCSM 6120.05	Manual for Tactical Command and Control Planning Guidance for Joint Operations, Joint Interface Operational Procedures for Message Text Formats	CMD
CJCSM 6230.05	Joint Have Quick Planner's Guide - Joint Employment Guidance	CMD
JP 1	Joint Warfare of the Armed Forces	SADC, CMD
JP 0-2	Unified Actions of Armed Forces (UNAAF)	SADC
JP 3-0	Doctrine for Joint Operations	SADC, CMD
JP 3-01	Joint Doctrine for Countering Air and Missile Threats	SADC, SADC OPS, SAD, WEPS
JP 3-01.2	Joint Doctrine for Theater Counterair Operations	SADC, SADC OPS, SAD, SWD
JP 3-01.4	Joint Tactics, Techniques, and Procedures (JTTP) for Joint Suppression of Enemy Air Defense	SADC, SADC OPS, SAD, SWD, STD
JP 3-01.5	Doctrine for Joint Theater Missile Defense	SADC, SADC OPS, SAD, SWD
JP 3-02	Joint Doctrine for Amphibious Operations	SADC, SADC OPS, SAD
JP 3-03	Doctrine for Joint Interdiction Operations	SADC, SADC OPS, SAD
JP 3-09	Doctrine for Joint Fire Support	SADC, SADC OPS
JP 3-09.3	JTTP for Close Air Support (CAS)	SADC, SADC OPS, SAD, STD
JP 3-13	Joint Doctrine for Information Operations	SADF, CMD
JP 3-13.1	Joint Doctrine for Command and Control Warfare (C2W)	SADF, CMD
JP 3-30	Command and Control for Joint Air Operations	SADC, SADC OPS, CMD

Table 3-8.-- Combined/Joint/Joint-Related Publications--Continued.

PUBLICATION	TITLE	SECTION
JP 3-50.2	Doctrine for Joint Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF
JP 3-50.21	Joint Tactics, Techniques, and Procedures for Combat Search and Rescue	SADC, SADC OPS, CMD, TRAF
JP 3-51	Joint Doctrine for Electronic Warfare	SADC, SADC OPS, CMD
JP 3-52	Doctrine for Joint Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
JP 5-0	Doctrine for Planning Joint Operations	SADC, SADC OPS, CMD
JP 6-0	Doctrine for C4 Systems Support to Joint Operations	SADC, SADC OPS, CMD, SCC
JP 6-02	Doctrine for Employment of Operational/Tactical C4 Systems	SADC, SADC OPS, CMD, SCC
	Joint Tactical Air Operations (JTAO) Interface Training Reference Notebook	SAD, SURV, INSTR
	JTAO Interface Interoperability Handbook	SAD, SURV
	Executive Guide to the JTAO Interface	SADC, SADC OPS
	JTAO Interface Training Plan	SADC, SADC OPS, CMD
	JTAO Computer-Based Training (CBT) Modules	All
	JTAO Video Training Tapes	All
	Understanding Data Links	SADC, SADC OPS, CMD, SURV
	Understanding Link 4A/11/16	SADC, SADC OPS, CMD, SURV

Table 3-9.-- Marine Corps/Multi-Service Publications.

PUBLICATION	TITLE	SECTION
MCDP 1	Warfighting	All
MCDP 1-1	Strategy	SADC, CMD
MCDP 1-2	Campaigning	SADC, SADC OPS, CMD
MCDP 1-3	Tactics	SADC, SADC OPS, CMD
MCDP 2	Intelligence	SADC, SADC OPS, CMD
MCDP 3	Expeditionary Operations	SADC, SADC OPS, CMD
MCDP 4	Logistics	SADC, SADC OPS, CMD
MCDP 5	Planning	SADC, SADC OPS, CMD
MCDP 6	Command and Control	SADC, SADC OPS, CMD
MCWP 0-1	Marine Corps Operations	All
MCWP 2-1	Intelligence Operations	SADC, SADC OPS, CMD
MCRP 2-11B	Joint STARS	SADC, SADC OPS, SAD, SWD
MCRP 2-12A	IPB	SADC, SADC OPS, CMD

Table 3-9.-- Marine Corps/Multi-Service Publications--Continued.

PUBLICATION	TITLE	SECTION
MCRP 3-0A	Unit Training Management Guide	SADC, SADC OPS, CMD, INSTR
MCRP 3-0B	How to Conduct Training	SADC, SADC OPS, CMD, INSTR
MCWP 3-16	Fire Support Coordination in the Ground Combat Element	SADC, SADC OPS, SAD
MCRP 3-16A	TTP for Targeting	SADC, SADC OPS, SAD
MCRP 3-16C	Fire Support for the Combined Arms Commander	SADC, SADC OPS, SAD
MCWP 3-2	Aviation Operations	All
MCWP 3-22	Anti-Air Warfare	All
MCRP 3-22.2A	Suppression of Enemy Air Defenses	All
MCWP 3-23	Offensive Air Support	All
MCWP 3-23.1	Close Air Support	All
MCWP 3-23.2	Deep Air Support	All
MCWP 3-24	Assault Support	All
MCWP 3-25	Control of Aircraft and Missiles	All
MCRP 3-25A	Multi-Service Procedures for JATC	SADC, SAD, TRAF
MCRP 3-25B	Multi-Service Brevity Codes	All
MCRP 3-25C	Intro to TADIL-J and Quick Reference Guide	SADC, SADC OPS, SAD, SID, DLC
MCWP 3-25D	Integrated Combat Airspace Command and Control (ICAC2)	SADC, SADC OPS, CMD, TRAF
MCWP 3-25.2	Multiservice Procedures for the Theater Air-Ground System (TAGS)	All
MCWP 3-25.3	MACCS Handbook	All
MCWP 3-25.4	Marine TACC Handbook	All
MCRP 3-25.4A	JAOC/AAMDC Coordination	SADC, SADC OPS, SAD, SWD
MCWP 3-25.5	DASC Handbook	All
MCWP 3-25.6	SAAWC Handbook	All
MCWP 3-35.7	TAOC Handbook	All
MCWP 3-25.8	MATCD Handbook	All
MCWP 3-25.9	MACCS Communications Handbook	All
MCWP 3-25.10	LAAD Battalion Handbook	All
MCRP 3-25.10A	Low Altitude Air Defense (LAAD) Gunner's Handbook	CMD
MCWP 3-26	Air Reconnaissance	All
MCWP 3-31.1	Supporting Arms in Amphibious Operations	All
MCWP 3-35.3A	MTTP Procedures for Aviation Urban Operations	SADC, SADC OPS, SAD
MCWP 3-36	Information Operations	All
MCWP 3-36.1	Electronic Warfare	All
MCWP 3-37	MAGTF NBC Defense Operations	All
MCRP 3-37A	NBC Field Handbook	All
MCWP 3-37.2	NBC Protection	All

Table 3-9.-- Marine Corps/Multi-Service Publications--Continued.

PUBLICATION	TITLE	SECTION
MCWP 3-41.1	Rear Area Operations	All
MCWP 3-42.1	Fire Support in MAGTF Operations	SADC, SADC OPS, SAD
MCWP 5-1	Marine Corps Planning Process	SADC, SADC OPS, CMD
MCRP 5-2A	Operational Terms and Graphics	SADC, SADC OPS, CMD, SADFC, SADFO
MCWP 6-2	MAGTF C2	SADC, SADC OPS, CMD
MCWP 6-22	Communications and Information Systems	SADC, SADC OPS, CMD
MCWP 6-23	MAGTF Information Management	SADC, SADC OPS, CMD
MCRP 6-2.1.2	Tactical Brevity Codes	All
MCO 3501.9B	Marine Corps Combat Readiness Evaluation System (MCCRES)	All
TM 08565B-10/1	Operating Instructions - TAOM AN/TYQ-23(V)4	All
TM 11240 Series	Motor Transport Technical Characteristics	SAD, SCC
	DASC Pocket Checklist	CMD
	TAOC Pocket Checklist	All

Table 3-10.-- Navy Publications.

PUBLICATION	TITLE	SECTION
NWP 3-01.01	Anti-Air Warfare	All
NWP 3-01.10	Anti-Air Warfare Commander's Manual	SADC, SADC OPS, SAD, WEPS
NTTP 3-01.5	AEGIS Core Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-20.4	Surface Warfare Aviation Tactics	SADC, SADC OPS, SAD, WEPS
NWP 3-22.5	F/A-18 A/B Tactical Manual	SADC, SADC OPS, SAD, WEPS, AICI
OPNAVINST 3710	NATOPS Manual	SADC, SADC OPS, CMD
	TOPGUN Manual	SADC, SADC OPS, SAD, WEPS, AICI

Table 3-11.-- Air Force Publications.

PUBLICATION	TITLE	SECTION
AFDD 2-1	Air Warfare	SADC, SADC OPS, CMD
AFDD 2-1.1	Counterair Operations	SADC, SADC OPS, CMD
AFDD 2-1.3	Counterland	SADC, SADC OPS, CMD
AFDD 2-1.6	Combat Search and Rescue	SADC, SADC OPS, CMD
AFDD 2-1.7	Airspace Control in the Combat Zone	SADC, SADC OPS, CMD
AFDD 2-8	Command and Control	SADC, SADC OPS, CMD
ACH-JFACC	Aerospace Commander's Handbook (ACH): The JFACC	SADC, SADC OPS, CMD, TRAF
ATTP 3-1 Vol 1	General Planning and Employment Considerations	All
ATTP 3-1 Vol 2	Threat Reference Guide	All
ATTP 3-1 Vol 14	Air Defense	All
ATTP 3-1 Vol 15	Tactical Employment -AWACS	All
ATTP 3-1 Vol 26	Theater Air Control Systems	All

Table 3-12.-- Army Publications.

PUBLICATION	TITLE	SECTION
FM 27-10	Law of Land Warfare	SADC, SADC OPS, CMD
FM 44-8	Combined Arms For Air Defense	SADC, SADC OPS, WEPS
FM 44-18	Air Defense Employment: Stinger	SADC, SADC OPS, WEPS
FM 44-18-1	Stinger Team Operations	SADC, SADC OPS, WEPS
FM 44-44	Avenger Platoon, Section, And Squad Operations	SADC, SADC OPS, WEPS
FM 44-85	Patriot Battalion and Battery Operations	SADC, SADC OPS, WEPS
FM 44-94	Army Air and Missile Defense Command Operations	SADC, SADC OPS, WEPS
FM 44-100	US Army Air And Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-12	Army Theater Missile Defense Operations	SADC, SADC OPS, WEPS
FM 100-103	Army Airspace Command and Control in a Combat Zone	SADC, SADC OPS, CMD, TRAF

320. LIVE/SIMULATOR EVENT TRAINING: ACEO1. **Core Skill Introduction Phase**

STAGE	EVENTS	HOURS	PERCENT
ACEOC MCCES			60.00%

2. **Core Skill Basic Phase**

STAGE	EVENTS	HOURS	PERCENT
SYSTEM TRAINING	5	12	3.00%
ASSISTANT WEAPONS CONTROLLER TRAINING	5	15	6.00%
SURVEILLANCE OPERATOR TRAINING	5	26	6.00%
TOTALS:	15	53	15.00%

3. **Core Skill Advanced Phase**

STAGE	EVENTS	HOURS	PERCENT
DATA LINK COORDINATOR TRAINING	7	56	12.30%
TACTICAL AIR TRAFFIC CONTROLLER TRAINING	4	32	7.70%
TOTALS:	11	88	20.00%

4. **Core Plus Phase**

STAGE	EVENTS	HOURS	PERCENT
SECTOR AIR DEFENSE FACILITY OPERATOR	5	24	1.30%
SECTOR AIR DEFENSE FACILITY CREW CHIEF	2	12	0.56%
SYSTEM CONFIGURATION COORDINATOR TRAINING	4	68	1.18%
SENIOR IDENTIFICATION DIRECTOR	7	60	1.96%
TOTALS:	18	164	5.00%

5. **Instructor Phase**

STAGE	EVENTS	HOURS	PERCENT
INSTRUCTOR	2	10	0.00%
TOTALS:	2	10	0.00%

ACEO T&R SYLLABUS TOTALS:	46	315	100.00%
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330. LIVE/SIMULATOR EVENT PERFORMANCE REQUIREMENTS

1. General. The majority of the ACEO syllabus is ground training that requires in-depth integration within the MACCS. Likewise, development of MAGTF training involving extensive integration with applicable elements of the MAGTF is mandatory in the development of a fully combat qualified ACEO.

a. Live Training. Training event condition codes listed as **L** (live), **L/S** (live preferred/simulator optional) in this syllabus designate training to be conducted without the aid of simulator devices. Training not conducted in the live training environment shall be replaced with simulation where applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to the individual, crew, and agency training.

b. Simulator Training. Training event condition codes listed as S (simulator), S/L (simulator preferred/live optional) in this syllabus designate training to be conducted in the Tactical Air Operations Module (TAOM) and the Sector Air Defense Facility (SADF) where applicable. Training not conducted in the TAOM or SADF shall be replaced with live training where applicable as indicated in the condition code. A number of the live and simulated events require interaction with external C3 agencies. This interaction/interface is important to individual, crew, and agency training.

2. Minimum Performance Time for Syllabus "Write-Off"/Designations. Personnel may receive credit for successful completion of any syllabus requirement/performance standards (except qualifications) upon either a written, oral or practical demonstration of proficiency at the commanding officer's discretion. Completion of 80 percent of any syllabus event (except qualifications) may be "written-off" as complete at the discretion of the designated evaluator. Qualifications require a completed performance evaluation, and a designation letter signed by the commanding officer.

3. Evaluation of Training. Evaluation of those portions of the syllabus that are academic in nature will be conducted by either a written or oral examination or a combination of the two. Operational and system related subjects will be evaluated by practical application means whenever possible. Performance evaluation to qualify for mission qualifications and designations will be conducted per the Aviation T&R Program Manual.

331. COMPONENTS OF A T&R EVENT

1. General. An event contained within an Aviation T&R Manual is an individual or collective training standard and contains seven or eight components, dependent on the tier in which they are contained. Components not applicable to an event are omitted.

1/	2/	3/	4/	5/	6/
SAM-XXX	0.5	T,C,R, E	EQUIP	L/S (NS)	

Goal. The title of a unit of work that needs to be done in the performance of a Marine's duties. It is a clearly stated performance-oriented action requiring learned skills and knowledge (i.e. Engage a rotary winged aircraft).

Requirement. The condition(s) set for the real world or combat circumstances in which the tasks are to be performed. They indicate what is provided (equipment, tools, materials, manuals, aids, etc.), environmental constraints or conditions under which the task is performed, and any specific cues or indicators to which the performer must respond. When resources or safety requirements limit the conditions, this should be stated.

Performance Standard. The performance standard indicates the basis for judging the effectiveness of the performance. It consists of a carefully worded statement that identifies the proficiency level expected when the task is performed. This is

not guidance it's inviolate. Performance standards are specified in terms of accuracy, speed, sequencing, quality of performance, adherence to procedural guidelines, etc. *Listed for 100 level T&R events only.* Performance steps are the actions or decisions required to fulfill proficiency established by the standard. The major performance steps, which are required to perform the task of proficiency, are listed in the order of performance. Minor steps are not listed.

Prerequisite. Provides a listing of academic training or other T&R events that must be completed prior to satisfying the task.

External Syllabus Support. A listing or description of the external support requirements that may be required to satisfy completion of the task. May include range requirements, support aircraft, targets, training devices, or other personnel and equipment.

NOTES: 1/ Events are coded per Appendix B of Aviation T&R Program Manual.

2/ Projected event duration is furnished as a planning tool.

3/ Denotes the applicable (Basic) Program of Instruction.

4/ An "E" indicates an evaluated event.

5/ Equipment or activity subcategory is listed

6/ Condition Code. L = live Training; S = simulator training; L/S = live preferred/simulator optional; S/L = simulator preferred/live optional; where contained within () denotes optional conditions.

332. CORE SKILL INTRODUCTION TRAINING. Core Skill Introduction training (100 level) is conducted during the ADCOC at MCCES, 29 Palms, CA.

1. System Training

a. Purpose. To refine ACEO skills required for trouble shooting and maintaining the TAOM, and to provide a means for the ADCO to remain current.

b. General

(1) Administrative Notes. Core Skill Introduction training must be completed prior to beginning Core Skill Basic phase. The POI number for the Core Skill Introduction training syllabus is N0972P1.

(2) Prerequisite. Must possess a GT score of 105 or higher; must have a secret clearance; must have normal color vision; must be a U.S. citizen.

(3) Refresher Training. Refresher training is not used in the 100 level syllabus.

c. Crew Requirements. None.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (6 Events, 371.5 Hours)

FAM 100	11.5	E	TAOC	L
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Goal. Introduce basic MACS functions.

Requirement. Describe basic MACS functions. Refer to annex A, Air Defense Training Section POI Course ID M0972P1

Performance Standards. Pass a written test with a minimum score of 80%.

Prerequisite. None.

External Syllabus Support. None.

SYS 101	44.0	E	TAOC	L
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Goal. Perform system level functions.

Requirement. Given an operational TAOM. Refer to annex A, Air Defense Training Section POI Course ID M0972P1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Apply power to the TAOM.
- (2) Setup the Operator Console Unit (OCU) workstation.
- (3) Initiate a Program Load (IPL).
- (4) Load a database (DB).
- (5) Enter system level DB entries.
- (6) Modify system level DB entries.
- (7) Setup radios for voice communications.
- (8) Enter DB for voice communications.
- (9) Modify DB for voice communications.
- (10) Communicate within the TAOC.
- (11) Setup Voice Communications Access System (VCAS).
- (12) Communicate via voice with an external station.
- (13) Respond to an alert.
- (14) Recognize a system fault.
- (15) Locate a failed item.
- (16) Cable the TAOC into a multiple TAOM configuration.
- (17) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SO 100	83.75	E	TAOC	L
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Goal. Introduce surveillance functions.

Requirement. Given an operational TAOM. Refer to annex B, Air Defense Training Section POI Course ID M0972P1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a surveillance brief.
- (2) Enter Surveillance voice communications requirement.
- (3) Conduct surveillance debrief.
- (4) Complete surveillance reports.
- (5) Enter the DB for surveillance functions.
- (6) Modify the DB for surveillance functions.
- (7) Acquire an aircraft.
- (8) Classify an aircraft.
- (9) Perform Electronic Warfare (EW) functions.
- (10) Manually cross-tell tracks.
- (11) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SO 100	83.75	E	TAOC	L
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Goal. Introduce data link operations.

Requirement. Given an operational TAOM. Refer to annex B, Air Defense Training Section POI Course ID M0972P1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct data link operations with a tactical data system.
- (2) Enter the DB for data communications.
- (3) Modify the DB for data communications.
- (4) Configure the Radio Patch Panel (RPP) for operations.
- (5) Configure the Signal Entry Patch Panel (SEPP) for operations.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

TATC 100	69.0	E	TAOC	L
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Goal. Introduce Traffic Section functions.

Requirement. Given an operational TAOM. Refer to annex C, Air Defense Training Section POI Course ID M0972P1.

Performance Standards. Demonstrate proficiency in the following:

- (1) Perform TATC functions.
- (2) Enter Traffic Section communication requirements.
- (3) Construct a TATC log.

- (4) Conduct a Traffic Section brief.
- (5) Conduct a Traffic Section debrief.
- (6) Enter traffic information into the DB.
- (7) Modify traffic information into the DB.
- (8) Complete traffic section reports.
- (9) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

AWC 100	79.5	E	TAOC	L
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Goal. Introduce Weapons Section functions.

Requirement. Given an operational TAOM. Refer to annex D, Air Defense Training Section POI Course ID M0972P1.

Performance Standards. Demonstrate proficiency in the following:

Performance Steps.

- (1) Conduct a Weapons Section brief.
- (2) Enter Weapons Section communication requirements.
- (3) Complete Weapons Section report.
- (4) Conduct Weapons Section debrief.
- (5) Identify Sector Air Defense Facility (SADF) functions.
- (6) Enter weapons section information in Hook Data Read-out (HDRO).
- (7) Conduct data link operations with an aircraft.
- (8) Enter the DB for weapons functions.
- (9) Modify the DB for weapons functions.
- (10) Assist the AIC in the conduct intercept.
- (11) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

333. CORE SKILL BASIC TRAINING. The ACEO must complete SO and AWC within the first year of assignment to a MACS.

1. System Training

a. Purpose. To develop skills required to maintain system proficiency on the TAOM.

b. General. Contains the tactical and technical information necessary to maintain system proficiency.

c. Prerequisite. Completion of Core Skill Introduction phase.

d. Live Training (12 Events, 39.5 Hours)

SYS-200	2.0	TAOC	L
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Goal. Cable a TAOM system.

Requirement. Given two or more TAOMs and two or more radars.

Performance Standards. Perform system cabling to include:

- (1) DDB/VCB cabling.
- (2) Fiber optic cabling for LAN.
- (3) Multi-radar cabling.
- (4) Power and ECU pallet cabling.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-201	3.0	TAOC	L
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Goal. Perform TAOM and ECU pallet pack up.

Requirement. With SL3 tools in garrison or deployed.

Performance Standards. Prepare the TAOM for transport by performing the following actions:

- (1) Remove and pack up TAOM and all appropriate equipment on the ECU pallet.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-202	3.0	TAOC	L
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Goal. Setup the TAOM for operations.

Requirement. With SL3 tools in garrison or deployed.

Performance Standards. Properly set up a TAOM, ECU pallet, and external communications equipment to include.

- (1) Unpack and attach roof mount antennas.
- (2) Attach ECU ducting.
- (3) Erect ground antennas.
- (4) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-203	1.5	TAOC	L
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Goal. Operate the TAOM.

Requirement. Operate in a simulated NBC environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct MOPP gear exchange during crew rotation.
- (2) Perform crew requirements while in MOPP level four.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. NBCD training and MOPP level exchange.

External Syllabus Support. None.

SYS-204	2.0	TAOC	L
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Goal. Perform system turn up/turn down.

Requirement. TAOM(s) in garrison or deployed.

Performance Standards. Demonstrate proficiency in the following:

- (1) Properly turn on all TAOM equipment groups in proper order.
- (2) Properly turn down OCUWS and all equipment groups.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SYS-205	2.0	TAOC	L
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Goal. Perform organizational level maintenance (OLM) on the TAOM's.

Requirement. With SL3 tools in garrison or deployed.

Performance Standards. Demonstrate proficiency in the following:

- (1) Perform fault isolation via PM & Test.
- (2) Perform preventive maintenance (PM) on all equipment groups.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

2. Surveillance Operator (SO) Training

a. Purpose. To refine ACEO skills required for qualification as a SO, and to provide a means for a qualified SO to remain current.

b. General(1) Administrative Notes

(a) Perform all functions required for SO qualification and gain proficiency and maintain currency on TAOC system training.

(b) For evaluation purposes, an event will consist of a brief, execution and debrief.

(c) Prior to all events (including SIM) ensure all required Surveillance DB items are entered.

(d) All SO events will be supervised by a qualified SID or higher.

(2) Prerequisite. Completion of the Core Skill Introduction phase.

(3) Refresher Training. Refresher training is required once a Core Skill Basic ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet the ACEO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (5 Events, 26.0 Hours)

SO-210	2.0	TAOC	L/S
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Goal. Conduct manual crosstell.

Requirement. With an external agency or the SADF.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter appropriate reference system in the DB via a map/overlay.
- (2) Use established/published crosstell format to pass track information on the appropriate net, when directed by the SID,.
- (3) Post and maintain Non-Real Time (NRT) rate aided tracks based on information received from external agencies.
- (4) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-33, T-46, T-47, T-48.

External Syllabus Support. External C³ agencies or SADF.

SO-211	4.0	TAOC	S/L
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Goal. Perform as SO.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter all appropriate Surveillance DB entries to include:
 - (a) Local/Remote radars.
 - (b) Special points or corridors.
 - (c) IFF/SIF codes.
 - (d) Auto ID parameters.
 - (e) Applicable map/overlay features.
- (2) Execute briefed ID and classification procedures:
 - (a) Correlate SIF codes with published directives.
 - (b) Interrogate Mode IV and post results as required.
 - (c) Adhere to published ID criteria/ROE when evaluating unknown tracks.
 - (d) Classify tracks in a timely manner, per SID direction.
- (3) Symbol management with a focus on data entry/updating.
- (4) Conduct manual crosstell as directed.
- (5) Compile and forward any applicable reports.
- (6) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SO-210.
- (2) Academics: T-08, T-25, T-41.

External Syllabus Support. None.

SO-212	4.0	TAOC	L/S
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Goal. Perform SO functions.

Requirement. During data link operations.

Performance Standards. Demonstrate proficiency in the following:

- (1) All standards listed in SO-211, in addition to operating in a data link environment.
- (2) Manage symbols to include classification of tracks and dual track resolution.
- (3) Respond to data link orders as directed by the DLC/SID.
- (4) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) SO-211.
- (2) Academics T-31.

External Syllabus Support. External C3 agencies.

SO-213	8.0	E	TAOC	S/L
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Goal. Perform SO functions.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed in SO-211 and SO-212.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SO-212.

External Syllabus Support. External C3 surveillance platforms.

SO-214	8.0	E	TAOC	L
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Goal. Qualified as SO.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements listed in SO-213.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SO-213.

External Syllabus Support. External C3 agencies.

3. Assistant Weapons Controller (AWC) Training

a. Purpose. To refine ACEO skills required for qualification as AWC, and to provide a means for the qualified AWC to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions required for AWC qualification, gain proficiency and maintain currency on TAOC system training.

(b) For evaluation purposes, an event will consist of a brief, execution and debrief.

(c) A comprehensive brief and debrief will be conducted for each mission per squadron SOPs (based on TOPGUN and F/A-18 TACMAN guidelines).

(d) The AWC will become proficient in assisting the AIC/MC during live and simulated integrated air defense exercises with multiple fighters/GBAD units in a dynamic threat environment.

(2) Prerequisite. Completion of the Core Skill Introduction phase.

(3) Refresher Training. Refresher training is required once a Core Skill Basic ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet the ACEO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

e. Live and Simulator Event Training (5 Events, 15.0 Hours)

AWC-220	1.5	TAOC	S/L
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Goal. Assist the AIC.

Requirements. During a section Fighter Intercept mission against a dynamic threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter all DB items required for the mission.
- (2) Manage symbols to include assignments, join-ups, and Link-4A/Link-16 functions as briefed.
- (3) Update all aircraft information in the HDRO.
- (4) Provide the AIC with threat information to include:
 - (a) Number of groups.
 - (b) Target altitude.
 - (c) Target heading.
 - (d) Formation and tactics.
 - (e) Target aspect (hot, cold, capping, etc.).
- (6) Update threat ranking as directed.
- (7) Advise the AIC of any items affecting flight safety, i.e. factor traffic/airspace boundaries.
- (8) Assist the AIC to successfully complete squadron SOP checklist for an aircraft emergency.
 - (a) Determine the nature of the emergency.
 - (b) Determine the last known speed and heading.
 - (c) Identify and triangulate position of the aircraft with the emergency.
 - (d) Establish emergency fix as appropriate.
- (9) Perform applicable switch functions.
- (10) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-03, T-17, T-26, T-38, T-39, T-41, T-55, T-56, T-71, T-82, T-84, T-85, T-86.

External Syllabus Support. None.

AWC-221	1.5	R	TAOC	S/L
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Goal. Assist the AIC.

Requirement. During a division Fighter Intercept (FI) mission against a dynamic threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in AWC-220.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. AWC-220.

External Syllabus Support. None.

AWC-222	4.0		TAOC	L
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Goal. Assist the AIC.

Requirement. During a "2 v X" mission against a dynamic threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter all DB items required for the mission.
- (2) Manage symbols to include assignments, join-ups, and Link-4A/Link 16 functions as briefed.
- (3) Update all aircraft information in the HDRO display.
- (4) Provide the AIC with threat information to include:
 - (a) Number of groups.
 - (b) Target altitude.
 - (c) Target heading.
 - (d) Formation and tactics.
- (e) Target aspect (hot, cold, capping, etc.).
- (6) Update threat ranking as directed.
- (7) Advise the AIC of any items affecting flight safety, i.e. factor traffic/airspace boundaries.
- (8) Perform all applicable switch functions.
- (9) Assist the AIC to successfully complete the squadron SOP emergency checklist.
- (10) Successfully complete 80% of the above listed standards.

Prerequisite. AWC-220.

External Syllabus Support. Fighter and aggressor aircraft.

AWC-223	4.0	E	TAOC	L
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Goal. Assist the AIC.

Requirement. During a "4 v X" mission against a dynamic threat.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in AWC-222.
- (2) Successfully complete 80% of the above listed standards.

Prerequisites. AWC-221 and AWC-222.

External Syllabus Support. Fighter and aggressor aircraft.

AWC-224	4.0	E	TAOC	L
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Goal. Qualify as AWC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in AWC-222.
- (2) Successfully complete 80% of the above listed standards.

Prerequisites. AWC-223.

External Syllabus. Fighter and aggressor aircraft.

334. CORE SKILL ADVANCED TRAINING

1. All Core Skill Basic (200 level) training must be complete prior starting the Core Skill Advanced phase (300 level).

2. The ACEO must complete either DLC or TATC during the second year of assignment to a MACS.

3. The ACEO must complete DLC and TATC during the third year of assignment to a MACS.

4. Data Link Coordinator (DLC) Training

a. Purpose. To refine ACEO skills required for the DLC qualification, and to provide a means for the qualified DLC to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions for DLC qualification.

(b) During each period, the ACEO must demonstrate proficiency in setting up data link equipment for the TAOM and making DB related entries required for data link operations and functioning as a member of the Surveillance Section.

(2) Prerequisite. Completion of the Core Skill Basic phase.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet, the ACEO will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the advanced level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

DLC-300	8.0	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In garrison or in the field, with a serial link (LINK-11B, NATO LINK-1, GBDL, ATDL-1).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and trouble shoot each link as applicable.
- (3) Perform order functions associated with the appropriate link.
- (4) Perform link management functions.
- (5) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-15, T-23, T-27, T-30, T-31, T-35, T-38, T-39, T-46, T-47, T-48, T-54, T-58, T-60, T-64, T-65.

External Syllabus Support. External C3 agencies.

DLC-301	8.0	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. While participating in a live netted data link (Link-11A).

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter required DB entries.
- (2) Activate, determine the status of, and trouble shoot each link as applicable.
- (3) Perform a POFA test.
- (4) Operate in the following modes:
 - (a) Radio Silent (RADSIL).
 - (b) Net Control Station (NCS).
 - (c) Picket.
- (5) Perform link management functions per SID direction.
- (6) Perform data link coordination responsibilities over designated voice nets.

(7) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) DLC-300.
- (2) Academics T-53.

External Syllabus Support. JTAO data link platform(s).

DLC-302	8.0	TAOC	L/S
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Goal. Perform DLC functions.

Requirement. In a node less link environment (LINK-16).

Performance Standards. Demonstrate proficiency in the following:

- (1) Achieve fine synchronization in LINK-16 Network, determine the status of, and troubleshoot the link as appropriate.
- (2) Operate in the Radio Silent and Data Silent modes.
- (3) Identify Stacked Net # assignments as per OPTASK LINK for voice and air control; ensure they are entered and validated in the DB.
- (4) Establish TAOC as Network Time Reference (NTR).
- (5) Extract information from the slot block allocation sheet in the NDL for entry into the DB.
- (6) Enter the data filters per the OPTASK LINK.
- (7) Load appropriate time and NDL into the JTIDS terminal from the TAOM then troubleshoot.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) DLC-300.
- (2) Academics T-56.

External Syllabus Support. LINK-16 capable external C3 agencies.

DLC-303	8.0	TAOC	L/S
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Goal. Prepare/set-up ADCP as a stand alone system.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Erect ground antenna.
- (2) Ensure workstation and server drives are properly installed.
- (3) Load KGV-8 with crypto fill device.
- (4) Load Network Data Load (NDL).
- (5) Download emplacement data.
- (6) Activate the link.

- (7) Monitor link activity utilizing MITS laptop and troubleshoot the Link.
- (8) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-4.

External Syllabus Support. ADCP and JRE.

DLC-304	8.0	TAOC	L/S
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Goal. Prepare/setup ADCP within TAOM configuration.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Ensure Multi-Channel Interface Unit (MICU) hard drive is properly installed.
- (2) Load KGV-8 with crypto fill device.
- (3) Activate the link.
- (4) Monitor link activity utilizing MITS laptop and troubleshoot the link.
- (5) Successfully complete 80% of the above listed standards.

Prerequisite. Academics T-4.

External Syllabus Support. ADCP and JRE.

DLC-305	8.0	R, E	TAOC	L/S
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Goal. Perform as DLC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief link critical information during a TAOC crew brief.
- (2) Ensure data link DB entries are entered and correct.
- (3) Ensure TAOC data link equipment is set up/keyed.
- (4) Ensure required DL filters are entered and activated.
- (5) Troubleshoot the link and take corrective action as needed.
- (6) Perform link management functions per SID direction.
- (7) Successfully complete 80% of the above listed standards.

Prerequisites. DLC-301, DLC-302, DLC-303, DLC-304.

External Syllabus Support. External C3 agencies.

DLC-306	8.0	E	TAOC	L
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Goal. Qualify as DLC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in DLC-305.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. DLC-305.

External Syllabus Support. External C3 agencies.

5. Tactical Air Traffic Controller (TATC) Training.

a. Purpose. To refine ACEO skills required for qualification as a TATC, and provide a means for the qualified TATC to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions for TATC qualification.

(b) During each period, the ACEO must demonstrate proficiency in passing threat information, maintaining situation awareness, utilization of proper report formats, voice and data communication procedures, and functioning as a member of the Traffic Section.

(2) Prerequisite. Completion of the Core Skill Basic phase.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet the ACEO will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the higher level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

TATC-310	8.0	TAOC	S
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Goal. Perform as TATC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter and maintain the Traffic DB per STD direction.
- (2) Operate TBMCS to receive and parse the ATO and construct a TATC Log.
- (3) RIO aircraft, to include:
 - (a) PUC and Words.
 - (b) Covered comm.
 - (c) Authentication procedures.

- (4) Conduct SIF/Mode IV checks on all applicable aircraft.
- (5) Initiate and maintain LINK-4A/LINK-16 for capable aircraft until a handover is accomplished.
- (6) Conduct external/internal handovers of aircraft as required.
- (7) Coordinate Aerial Refueling (AR) operations.
 - (a) Place tanker on the appropriate track and provide flight following as required.
 - (b) Execute the Slide/Retrograde plan as the threat dictates or per STD direction.
 - (c) Monitor, record, and report tanker fuel status.
 - (d) Route aircraft to the tanker.
 - (e) Route aircraft departing the tanker and handover to the appropriate controller/agency.
- (8) Maintain proper symbol management.
- (9) Maintain appropriate Traffic Section logs.
- (10) Assist the STD in traffic management functions.
- (11) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) Local area familiarization academics/test.
- (2) Academics: T-13, T-17, T-55, T-56, T-57, T-62, T-72, T-73, T-74

External Syllabus Support. Fixed/Rotary wing aircraft.

TATC-311	8.0	TAOC	L
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Goal. Perform as TATC.

Requirement. In garrison or in the field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Local operating procedures per squadron SOP.
- (2) Check-in procedures and proper use of air control communications.
- (3) Provide flight following with an emphasis on traffic deconfliction.
- (4) LINK-4A/LINK-16 initialization and usage with capable aircraft.
- (6) Symbolology management.
- (7) Successfully complete 80% of the above listed standards.

Prerequisites. Local area familiarization academics/test.

External Syllabus Support. Aircraft.

TATC-312	8.0	R, E	TAOC	L/S
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Goal. Perform as TATC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in TATC-310.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. TATC-311.

External Syllabus Support. External C3 agencies and Fixed/rotary wing aircraft.

TATC-313	8.0	E	TAOC	L
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Goal. Qualify as TATC.

Requirement. In an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in TATC-311 and 312.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. TATC-312.

External Syllabus Support. External C3 agencies and tactical/support aircraft.

335. CORE PLUS TRAINING

1. SADFO training can be conducted concurrently with Core Skill Basic (200 level) training.

2. SAD FCC and SCC training can be conducted concurrently with Core Skill Advanced (300 level) training.

3. The ACEO must complete both the Core Skill Basic (200 level) and Core Skill Advanced (300 level) prior to training as a SID.

4. Sector Air Defense Facility Operator (SADFO) Training

a. Purpose. To refine ACEO skills required for SADFO qualification, and to provide a means for a qualified SADFO to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions required for SADFO qualification, and gain proficiency and maintain currency on SAD F systems training.

(b) During each SADFO event, the ACEO must demonstrate proficiency in maintaining situational awareness, using proper report formats, and functioning as a member of the SAD F Crew.

(d) Core Skill Basic phase can be conducted concurrently.

(2) Prerequisite. None.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet the ACEO will complete "R" coded events in the 200 level syllabus.

c. Crew Requirements. A core competent TAOC and SADF crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

SDFO-400	4.0	TAOC	L
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Goal. Set-up/pack-up the SADF for operations.

Requirement. With SL3 tools in garrison or deployed.

Performance Standards. Demonstrate proficiency in the following:

- (1) Setup/packup a SADF with guidance from the SADF crew chief.
- (2) Assist SysAdmin personnel in the setup/packup of tactical information systems.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. None.

External Syllabus Support. None.

SDFO-401	4.0	TAOC	L/S
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Goal. Perform as a plotter within the SADF.

Requirement. With an external agency or the TAOC.

Performance Standards. Demonstrate proficiency in the following:

- (1) Maintain situation displays within the SADF.
- (2) Receive and plot manual crosstell.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SO-210.

External Syllabus Support. External C³ agencies.

SDFO-402	4.0	TAOC	L/S
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Goal. Operate MAGTF Software Baseline (MSBL) systems (i.e. IOW, CTT, C2PC, IBR).

Requirement. In garrison or in the field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Apply power and login
- (2) Use software applications: map functions, track functions, and overlays.
- (3) Send and receive operator notes
- (4) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-08, T-11, T-14, T-32, T-34, T-59, T-62.

External Syllabus Support. External C³ agencies.

SDFO-403	4.0		TAOC	L/S
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Goal. Operate TBMCS.

Requirement. In garrison or in the field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Apply power and login
- (2) Receive and parse the ATO.
- (3) Input mission update information.
- (4) Send and receive email messages.
- (5) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-08, T-11, T-14, T-32, T-34, T-59, T-62.

External Syllabus Support. External C³ agencies.

SDFO-404	8.0	E	TAOC	L/S
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Goal. Designate as SDFO.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SDFO 400-403.
- (2) Successfully complete 80% of the above listed standards.

Prerequisites. SDFO-400, SDFO-401, SDFO-402, SDFO-403.

External Syllabus Support. External C3 agencies.

5. Sector Air Defense Facility Crew Chief (SADFCC) Training.

a. Purpose. To refine ACEO skills required for the SADFCC, and to provide a means for a designated SADFCC to remain current.

b. General(1) Administrative Notes

(a) Perform all functions required for SAD FCC designation, and gain proficiency and maintain currency on SADF systems training.

(b) During each SAD FCC event the ACEO must demonstrate proficiency in maintaining situational awareness, using proper report formats, and functioning as a member of the SADF crew.

(c) Core Skill Advanced phase can be conducted concurrently.

(2) Prerequisite. Completion of the Core Skill Basic phase.

(3) Refresher Training. Refresher training is required once a Core Skill Advanced ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet, the ACEO will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC and SADF crew will be required for the exercise events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

SDFC-410	4.0	TAOC	L/S
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Goal. Perform as SDFC.

Requirement. In garrison or in the field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Supervise proper setup/packup of the SADF.
- (2) Ensure timely and accurate update of the situational displays.
- (3) Train SADF operator on tactical information systems.
- (4) Manage SADF operator(s).
- (5) Coordinate with SysAdmin personnel as required.
- (6) Initialize and reset the gateway.
- (7) Maintain, secure and issue classified material.
- (8) Compile all reports in proper format.
- (9) Maintain a SAD FCC logbook.
- (10) Successfully complete 80% of the above listed standards.

Prerequisite. SDFO-404.

External Syllabus Support. None.

SDFC-411	8.0	E	TAOC	L
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Goal. Designate as SDFC.

Requirement. In an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SDFC-400.
- (2) Successfully complete 80% of the above listed standards.

Prerequisite. SDFC-410.

External Syllabus Support. External C3 agencies and tactical/support aircraft.

6. System Configuration Coordinator (SCC) Training

a. Purpose. To refine ACEO skills required for SCC designation, and to provide a means for a designated SCC to remain current.

b. General

(1) Administrative Notes

(a) Perform all functions for SCC designation.

(b) During each period, the ACEO must demonstrate proficiency in system troubleshooting and maintenance of the TAOM, ECU pallet, and other equipment organic to the TAOM, and to function as a key member of the TAOC crew supporting the command section.

(c) At least one live SCC performance event will be conducted with a full TAOC crew.

(2) Prerequisite. Completion of the Core Skill Basic phase.

c. Crew Requirements. A core competent TAOC crew will be required for the advanced level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow-on training events.

SCC-420	24.0		TAOC	L
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Goal. Perform SCC functions.

Requirement. During daily non-exercise operations.

Performance Standards. Demonstrate proficiency in the accomplishment/supervision of the following:

- (1) System setup and initialization.
- (2) Key all crypto.
- (3) Appropriate DB is loaded.
- (4) Trouble shoot and fault isolate the components of the seven major equipment groups of the TAOC to the LRI.
- (5) Take appropriate actions on all operator alerts, OCU errors, and printer codes.
- (6) Ensure continuity of operations by reconfiguring the system around faulted units.
- (7) Maintain all SCC/crew maintenance logs.
- (8) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-04, T-10, T-14, T-37, T-38, T-39, T-40, T-42, T-43, T-50, T-51, T-61, T-62.

External Syllabus Support. None.

SCC-421	8.0		TAOC	L
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Goal. Supervise requirements for TAOM embarkation and set-up.

Requirement. Accomplished in garrison or in the field.

Performance Standards. Demonstrate proficiency in the following:

- (1) Proper pack up of the TAOM and all associated equipment.
- (2) Stage and load the TAOM/ECU pallets.
- (3) Off-load and placement of the TAOM/ECU pallets.
- (4) Unpack the TAOM/ECU pallets, and set up and cabling of equipment to include external communications and radar.
- (5) Echelon in/out TAOMs and voice/data circuits.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. SCC-420.

External Syllabus Support. MHE.

SCC-422	24.0	R	TAOC	L
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Goal. Perform as SCC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the system configuration portion of the TAOC crew brief per TAOC PCL.
- (2) All requirements identified in SCC-420.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SCC-421.

External Syllabus Support. MHE.

SCC-423	12.0	E	TAOC	L
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Goal. Designate as SCC.

Requirement. During an exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) Brief the system configuration portion of the TAOC crew brief per TAOC PCL.
- (2) All requirements identified in SCC-420.
- (3) Successfully complete 80% of the above listed standards.

Prerequisite. SCC-422.

External Syllabus Support. MHE.

7. Surveillance Identification Director (SID) Training.

a. Purpose. To refine ACEO skills required for SID designation and to provide a means for a designated SID to remain current.

b. General

(1) Administrative Notes. Perform all functions for SID designation.

(2) Prerequisites. Completion of the Core Skill Advanced phase.

(3) Refresher Training. Refresher training is required once a Core Plus ACEO has been absent from an ACEO billet for 16 months or longer. Upon return to an appropriate billet, the ACEO will complete "R" coded events in the 300 level syllabus.

c. Crew Requirements. A core competent TAOC crew will be required for the higher-level evaluated events.

d. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow-on training events.

e. Live and Simulator Event Training (10 Events, 76.0 Hours)

SID-430	8.0		TAOC	L/S
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Goal. Conduct tactical planning for the Surveillance Section.

Requirement. In a garrison/field environment with appropriate documentation.

Performance Standards. Demonstrate proficiency with the following standards associated with planning an exercise.

- (1) Identify potential gaps in coverage due to terrain masking and radar horizon limitations, and recommend emplacement/employment of TAOC radars.
- (2) Coordinate with subordinate, adjacent and higher units for data link architecture and implementation per the OPTASK LINK.
- (3) Extract the ID matrix per published ROE, OPORD, ACP or ACO.
- (4) Conduct a detailed threat analysis.
- (5) Identify Surveillance Section communications requirements and assignments.
- (6) Recommend EMCON/RTADCN to the TAOC and subordinate agencies' based on OPORD, ACP and ACO direction.
- (7) Identify SO and DLC responsibilities.
- (8) Plan for employment of a remote radar.
- (9) Identify surveillance DB requirements.
- (10) Prepare a Surveillance Section crew brief per TAOC PCL.
- (11) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) DLC-306
- (2) Academics: T-16, T-18, T-32, T-65. T-25, T-33, T-46, T-47, T-48, T-63, T-64, T-68, T-69, T-70, T-71.

External Syllabus Support. Required planning documents.

SID-431	8.0	TAOC	L
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Goal. Maximize radar performance.

Requirement. In a garrison/field environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Recommend radar site selection.
- (2) Perform radar alignment.
- (3) Perform radar registration.
- (4) Coordinate to optimize performance of selected radars.
- (5) Recommend a radar degradation plan.
- (6) Develop a radar coverage diagram for system radars.
- (7) Conduct remote radar operations.
- (8) Plan for AN/TPS-59 decoy employment.
- (9) Know the capabilities/limitations of all TAOC radars.
- (10) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-37, T-40, T-43, T-68, T-69, T-70, T-71.

External Syllabus Support. None.

SID-432 12.0 E TAOC S/L

Goal. Plan for emplacement and employment of a TMD site.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Evaluate the threat.
- (2) Conduct a site survey.
- (3) Emplace a TMD site.
- (4) Provide reporting connectivity.
- (5) Troubleshoot the following:
 - (a) ADCP
 - (b) PPDL
 - (c) Radios
 - (d) Data Links
- (6) Successfully complete 80% of the above listed standards.

Prerequisites. Academics: T-4, T-15, T-34, T-67, T-70.

External Syllabus Support. None.

SID-433 8.0 R TAOC S/L

Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Conduct a detailed crew brief using pertinent air operations information received via the TAOC Operations Brief/MACCS Commander's brief. Conducted the brief per TAOC PCL and MCCRES standards.
- (2) Supervise surveillance DB entries including EMCON, data links, radar performance, MRRs and ID corridors.
- (3) Supervise air surveillance of the assigned sector.
- (4) Supervise implementation of established ID criteria and subsequent classification process.
- (5) Supervise initialization and management of data links.
- (6) Perform detailed casualty procedure planning in order to assume functions of the TDC or ICO when operating as the alternate TACC.
- (7) Manage the EP/EMCON plan for the TAOC and subordinate agencies.
- (8) Perform appropriate VFS/OS functions associated with surveillance.
- (9) Implement published manual crosstell procedures.
- (10) Manage the Surveillance Section per SAD direction.
- (11) Compile and forward applicable reports.
- (12) Successfully complete 80% of the above listed standards.

Prerequisites. SID-430, SID-431, SID-432.

External Syllabus Support. External C3 agencies.

SID-434	8.0	TAOC	L
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Goal. Perform as SID.

Requirement. In a garrison/field exercise environment.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-433.
- (2) Conduct surveillance planning and operations with a non-MACCS JTAO platform.
- (3) Successfully complete 80% of the above listed standards.

Prerequisites. SID-430, SID-431, SID-432.

External Syllabus Support. External C3 agencies.

SID-435	4.0	TAOC	L/S
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Goal. Perform EW operations.

Requirement. In a garrison/field environment using TAOC equipment.

Performance Standards. Demonstrate proficiency in the following:

- (1) Enter TAOC EMCON plan and missile thresholds in the DB.
- (2) Detect, identify and report any jamming to the SAD.
- (3) Fix the location of threat jammers with proper symbology (strokes/air tracks).
- (4) React to the EMCON alert and implement the TAOC EMCON plan per SAD direction.
- (5) Coordinate with the radar tech to optimize radar performance in an EW environment.
- (6) Successfully complete 80% of the above listed standards.

Prerequisite. SID-431

External Syllabus Support. External C3 agencies.

SID-436	12.0	E	TAOC	L
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Goal. Designate as SID.

Requirement. During a garrison/field exercise.

Performance Standards. Demonstrate proficiency in the following:

- (1) All requirements identified in SID-433 and SID-435.
- (2) Successfully complete 80% of the above listed standards.

Prerequisites. SID-433, SID-434, SID-435.

External Syllabus Support. External C3 agencies.

340. INSTRUCTOR DESIGNATION TRAINING

1. Instructor (INST) Training

a. Purpose. To designate the ACEO as an INST.

b. General

(1) Administrative Notes

(a) An ACEO will be considered for designation upon completion of all events contained with the three phases of training (academic, performance and evaluation).

(b) A review of the MPR will be conducted by the WTTP and a recommendation will be staffed to the commanding officer.

(c) The shall have a designation letter, with any waivers, deferments or endorsements, and will be filed in their MACCS Performance Record.

(2) Prerequisite. The INST will be current in the course of instruction for the given position.

c. Crew Requirements. None.

d. Academic Training. TAOC specific academic training is designed to support live/simulated training events and is accomplished as a prerequisite to individual performance events.

INST-500	6.0	T R	TAOC	L
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Goal. Conduct a period of instruction.

Requirement. An operational system, classroom facilities and instructor/evaluator.

Performance Standards. Demonstrate ability to instruct a TAOC "T" code event.

Prerequisite. None.

External Syllabus Support. None.

INST-501	4.0	T R	TAOC	L/S
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Goal. Instruct, monitor, evaluate and debrief a student

Requirement. An operational TAOC system with radars, aircraft and classroom facilities.

Performance Standards. Demonstrate the ability to:

- (1) Review student training history.
- (2) Develop and document a training plan.
- (3) Conduct a monthly Student Training Review.
- (4) Ensure continuous, objective assessment of the student's progress during training.
- (5) Provide recommendations on student readiness for qualification.
- (6) Identify areas requiring improved performance.
- (7) Provide information during the training review process, as requested.
- (8) Make decisions on skill enhancement training after receiving input from other instructors and the student.
- (9) Successfully complete 80% of the above listed standards.

Prerequisites

- (1) INST-500.
- (2) INST will be current in course of instruction for the given position.

External Syllabus Support. None.

350. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS TRACKING CODES

1. General

a. An ACEO will be considered for designation upon completion of all events contained with the three phases of training (academic, performance, and evaluation).

b. A review of the MPR will be conducted by the squadron's WTI and a recommendation will be staffed to the commanding officer.

c. The ACEO shall have a designation letter, with any waivers deferments or endorsements, filed in their MACCS Performance Record.

QUAL-600	0.0
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Goal. Qualify as SO.

Prerequisite. SO-214.

QUAL-601 0.0 _____

Goal. Qualify as AWC.

Prerequisite. AWC-224.

QUAL-602 0.0 _____

Goal. Qualify as DLC.

Prerequisite. DLC-306.

QUAL-603 0.0 _____

Goal. Qualify as TATC.

Prerequisite. TATC-313.

QUAL_604 0.0 _____

Goal. Qualify as SADFO.

Prerequisite. SDFO-404.

QUAL-605 0.0 _____

Goal. Qualify as SCC.

Prerequisite. SCC-423.

DESG-610 0.0 _____

Goal. Designate as SDFC.

Prerequisite. SDFC-411.

DESG-611 0.0 _____

Goal. Designate as SID.

Prerequisites. SID-436 and completion of academic COI,
performance and qualification events.

DESG-612 0.0 _____

Goal. Designate as INST.

Prerequisite. INST-501.

360. SPECIAL TRAINING REQUIREMENTS

COURSE	ACTIVITY
Multi-TADIL Advanced Joint Interface Course (MAJIC)	JMTS
JTIDS Course	JMTS
Joint Aerospace Computer Applications Course	C2WS

361. EXPENDABLE ORDNANCE REQUIREMENTS. None.362. PROFICIENCY INTERVALS.

1. Proficiency Interval. Tables 3-13 through 3-16 contain the proficiency intervals for the Core Skill Basic, Core Skill Advanced, Core Plus, and Instructor phases of training.

Table 3-13.-- ACEO Proficiency Interval for Core Skill Basic Phase

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS/ REMARKS
SYS	200	2		0.5					L
SYS	201	3		0.5					L
SYS	202	3		0.5					L
SYS	203	1.5		0.5					L
SYS	204	2		0.5					L
SYS	205	2		0.5					L
SO	210	2	12	1.1					L/S
SO	211	4	12	1.1					S/L
SO	212	4	12	1.1					L/S
SO	213	8	12	1.1				X	S/L
SO	214	8	24	1.6				X	L
AWC	220	1.5	12	1.1					S/L
AWC	221	1.5	12	1.1			X		S/L
AWC	222	4	12	1.1					L
AWC	223	4	12	1.1				X	L
AWC	224	4	24	1.6				X	L

Table 3-14.-- ACEO Proficiency Interval for Core Skill Advanced Phase

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS/ REMARKS
DLC	300	8	12	1.5					L/S
DLC	301	8	12	1.5					L/S
DLC	302	8	12	1.5					L/S
DLC	303	8	12	1.5					L/S
DLC	304	8	12	1.5					L/S
DLC	305	8	12	1.5					L/S
DLC	306	8	24	3.3			X	X	L
TATC	310	8	12	1.5					S
TATC	311	8	12	1.5					L
TATC	312	8	12	1.5			X	X	L/S
TATC	313	8	24	3.2				X	L

Table 3-15.-- ACEO Proficiency Interval for Core Plus Phase

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS/ REMARKS
SDFO	400	4	12	0.25					L
SDFO	401	4	12	0.25					L/S
SDFO	402	4	12	0.25					L/S
SDFO	403	4	12	0.25					L/S
SDFO	404	4	24	0.30				X	L/S
SDFC	410	4	12	0.26					L/S
SDFC	411	8	24	0.30				X	L
SCC	420	24	12	0.26					L
SCC	421	8	12	0.26					L
SCC	422	24	12	0.26			X		L
SCC	423	12	24	0.40				X	L/S
SID	430	8	12	0.26					L/S
SID	431	8	12	0.26					L
SID	432	12	12	0.26				X	L/S
SID	433	8	12	0.26			X		S/L
SID	434	8	12	0.26					L
SID	435	4	12	0.26					L/S
SID	436	12	24	0.40				X	L

Table 3-16.-- ACEO Proficiency Interval for the
Instructor/Special Skills Training Level.

EVENT	CODE	HOURS	PROFICIENCY INTERVAL	CRP	T	C	R	E	CONDITIONS/ REMARKS
INST	500	6		0	X		X		L
INST	501	4		0	X		X		L/S

363. EVENT UPDATE CHAINING

1. Table 3-17 contains the event update chaining for the ACEO.

Table 3-17.-- ACEO Event Update Chaining.

EVENTS	EVENTS UPDATED
200	
201	
202	
203	
304	
205	
210	
211	210
212	210, 211
213	210, 211, 212
220	
221	220
222	220
223	220, 221, 222
300	
301	
302	
303	300, 301
304	
305	
306	300, 301, 302
310	
311	
312	310, 311
313	310, 311, 312
400	
401	
402	
403	402
404	403
410	

Table 3-17.-- ACEO Event Update Chaining.

EVENTS	EVENTS UPDATED
411	410
420	202,204,205
421	200,201,202
422	202,204,205
423	200,201,202,204,205,420,421,422
430	
431	
432	
433	300,301,303,305,306,430,431
434	300,301,303,305,306,430,431,433
435	
436	300,301,303,305,306,430,431,433,435
500	
501	500